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.info

also in this issue...

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AMIGA UNIX

CDTV

- > HyperBook
- > TransWrite
- > QuickWrite
- > Xetec CDx-650
CD-ROM Drive
- > Video Tools
- > Imagine (part 2)
- > 10 Amiga Games
- > 2.0 Icons
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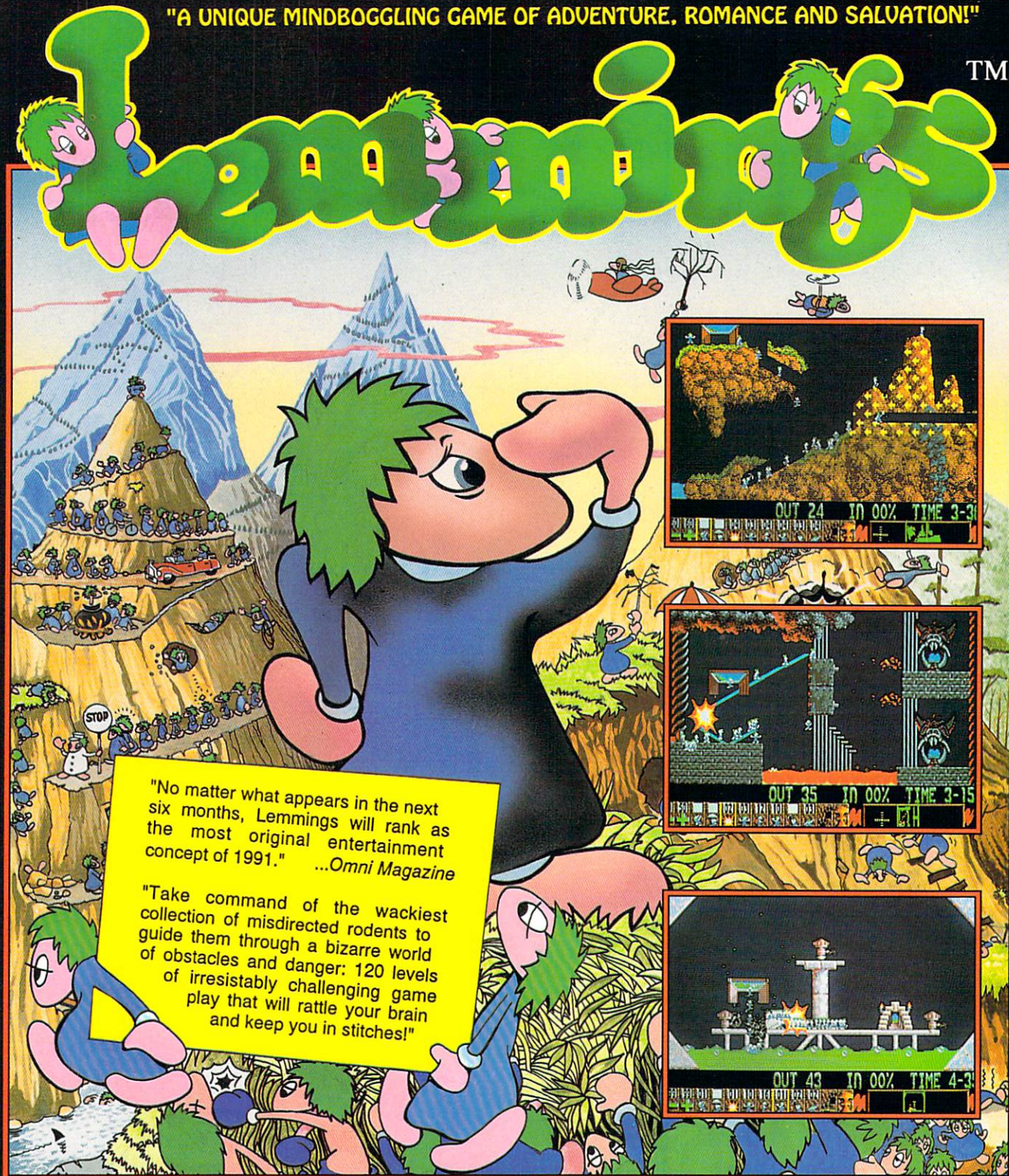


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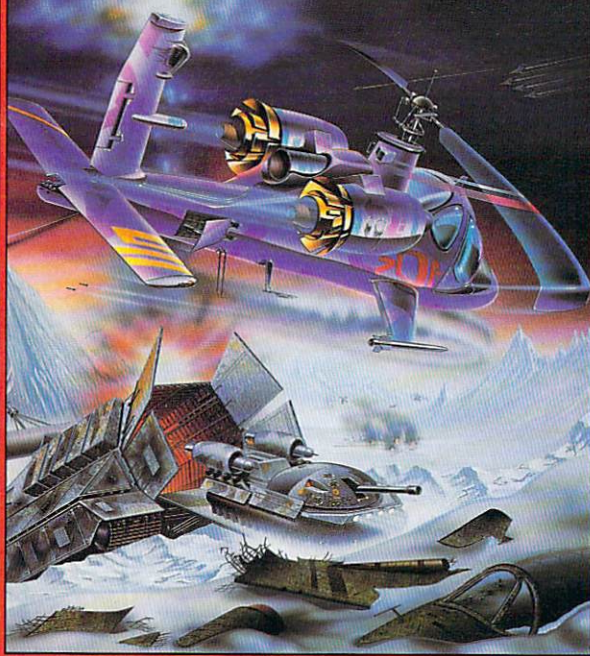
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ARMOUR-GEDDON



ARMOUR-GEDDON

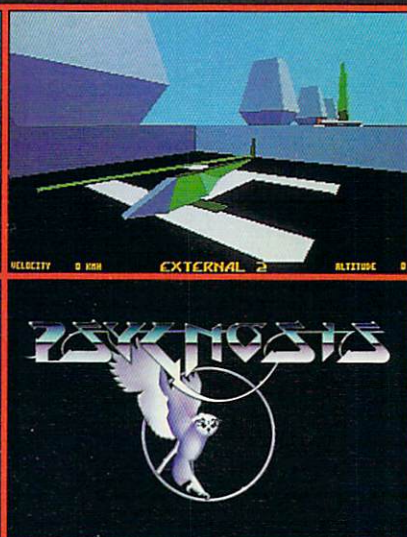
Post-Holocaust: A power crazed entity desires control of earth. They develop an energy beam and intend to bounce it off a custom-built satellite back to earth. All unprotected life will be wiped out. You select and control up to six diverse hi-tech vehicles at once in a race against time to seek and destroy enemy power lines and eventually knock out their beam generator.

Build up your arsenal by collecting enemy resources to help develop and create your own new weapon systems.

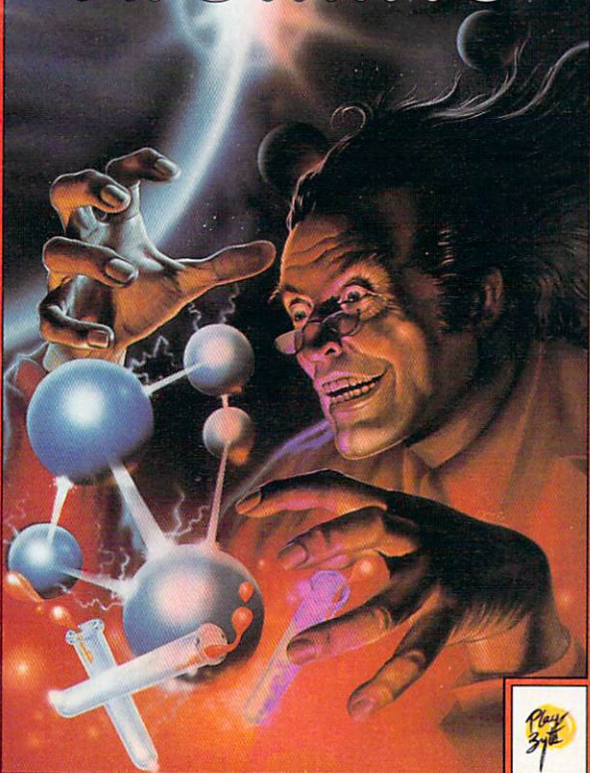
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Armour-Geddon: Strategy and simulation synthesized to perfection.

Screen Shots from the Amiga version.



ATOMINO



Psygnosis and their Molecule Madness

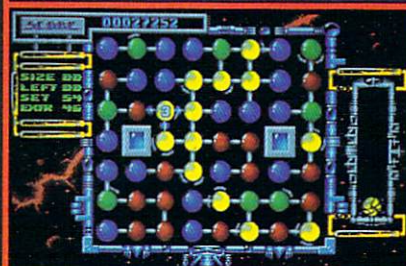
Against the clock, you use your chemical tendencies to build molecules out of atoms provided.

And don't be surprised if the very atom you *don't* need will be the one you're given to use next... Pray for a Joker Atom!

If you don't look like a mad scientist now, you will by the time you've tackled ATOMINO!

Up and Atom!

Screen Shots from the Amiga Version



PSYGNOSIS

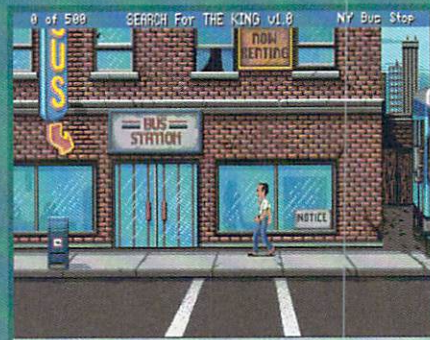
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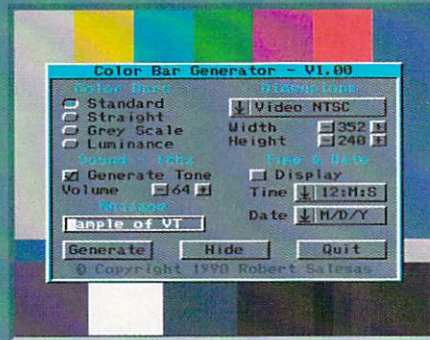
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ABOUT .info

.info strives to be a clear voice for Amiga users and a showcase for the talented people and exceptional products of the



Amiga computer community. Everything in this magazine (except for some of the ads) is digitally created, edited, and color separated as complete pages on Amigas running off-the-shelf software and peripherals, and output directly to film.

The 1st magazine produced entirely with personal computers.

All photographs are of
actual DCTV screens.

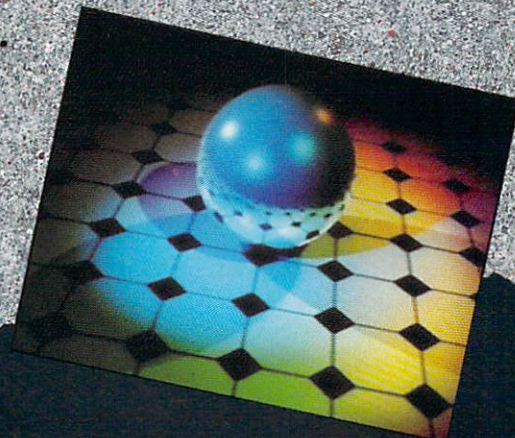
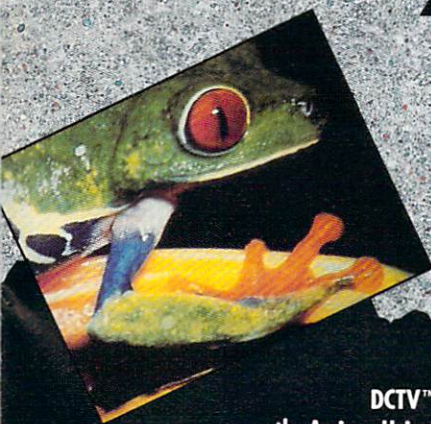


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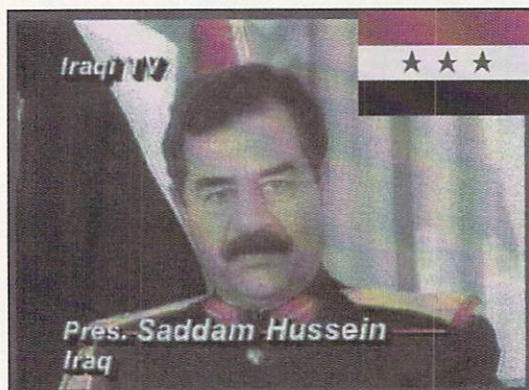
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Hacking CDTV



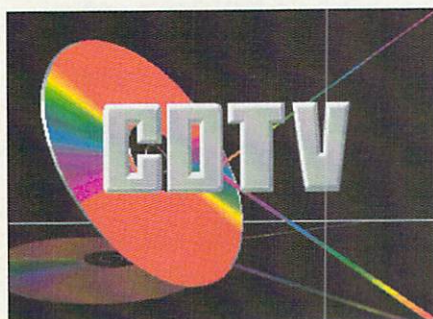
Saddam Hussein?
What's *he* doing on the
CDTV Welcome Disk?

A nice bit of
Brad Schenck eye-candy,
unfortunately unused.



There were rumors of hidden data on the CDTV Welcome Disk. We plugged in a disk drive, wrote some DOS scripts, and poked around. The rumors were true. The 'info' command shows that the Welcome Disk contains 16 megs of data (of a potential 550 megs). We estimate that about half of that space is taken up by unnecessary font files, unused art and animations (some by .info's own Brad Schenck), backup files, text files, and C source. There are earlier versions of many screens, the 'beta' CDTV logo, and even an invoice from the artist for his work. The complete script of the spoken narration is there, too. The weirdest thing hidden on the Welcome Disk is a set of files called 'JOKE' which show a screen of Saddam Hussein (digitized from CNN) while playing a sound sample of that old lady on TV saying "I've fallen and I can't get up!" We've got to wonder: who was responsible for cleaning things up before the disk was mastered? And has this fine attention to detail prevailed throughout the entire CDTV project? That would explain a lot.

- Mark & Benn



The original 'beta' CDTV boot logo.



The CDTV remote, an unused bit of art.

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IN 1972, AN ELITE AIR CORPS FLEW OVER VIETNAM. FLY WITH THE BRAVE AND THE BOLD.

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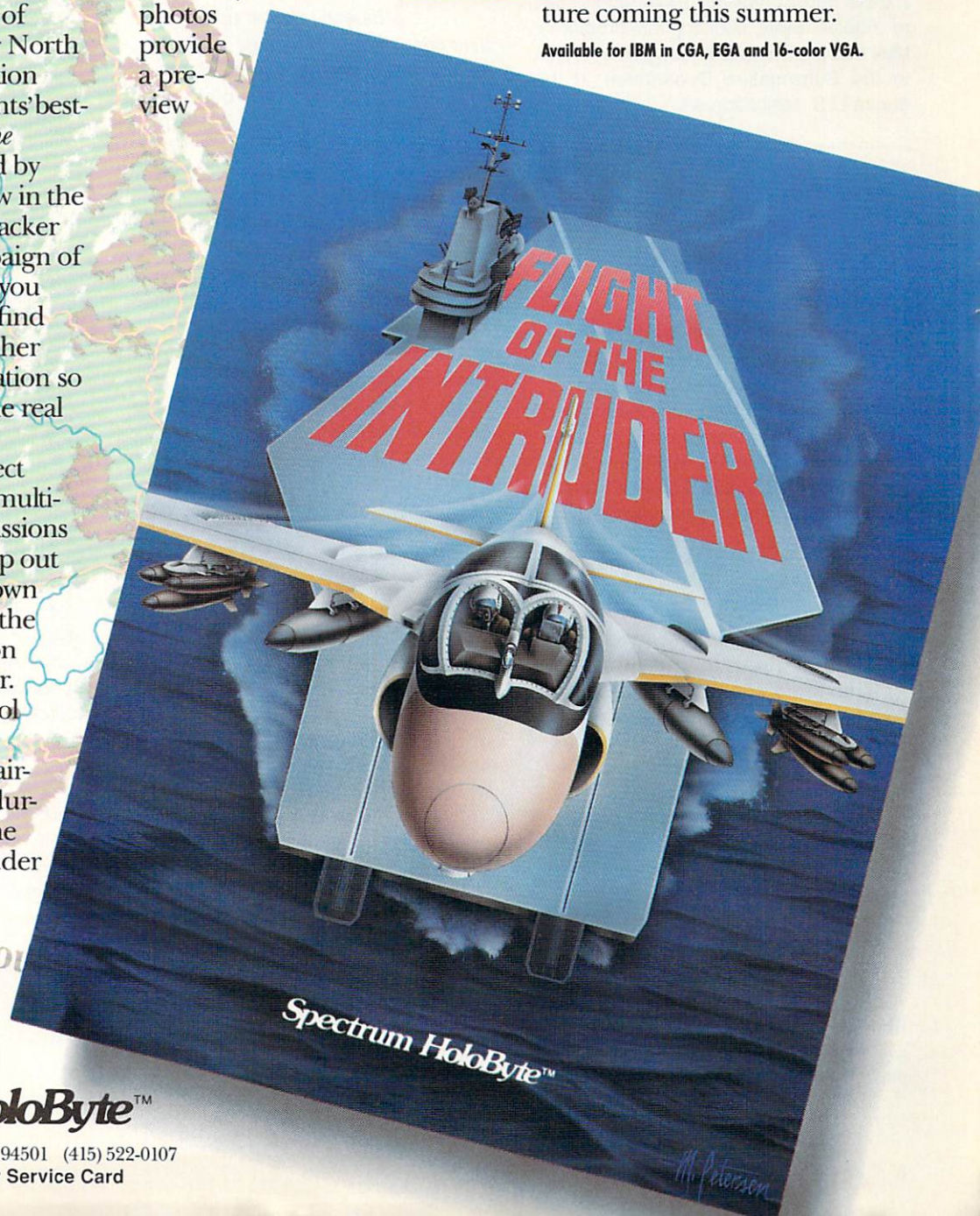


Zero in on the MiG, before he zeros in on you.



Mission accomplished! Now back to Yankee Station to plan your next attack.

Screens shown are IBM EGA. Others may vary.
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Here's the plea: *please* put the following information in all your reviews, particularly games:

- 1) Type of copy protection?
- 2) Hard Disk installable?
- 3) Runs on an A3000 under 2.0?
- 4) Runs on an A3000 under 1.3?

Without these four tidbits, your reviews don't answer the basic question many of us have: Will the thing run on my machine? This will add considerable value to your reviews. In fact, I think it's the most important thing you could be reporting. Thanks.

- Fred Hamilton, PLINK

I'm about halfway through your February issue and ready to pay up for three years worth of .info. Good job! I do have one request, however. With the release of the Amiga 3000 and Amiga-DOS 2.0, I would find it most helpful if your software reviews (especially games) included a note indicating if it were either compatible with the A3000 and/or 2.0. This will be especially important when all Amigas come with 2.0 ROMs and there are a lot of us 3000 owners out there now.

- DougEJ, BIX

We'll take a look at things and see if we can't at least come up with a system for reporting whether or not a game runs under

2.0. We can't, of course, offer any guarantees that any game will operate properly under your particular hardware and software setup. As for the copy-protection and hard drive installability questions, it's mostly becoming a moot point. Most entertainment publishers (recently including even Psygnosis) have moved away from disk-based copy protection to code wheels and manual-lookup schemes.

- Mark & Benn

I recently picked up my first ever copy of .info. Very nice. I bought my first Mac a month after its introduction in 1984 and have been pretty much Mac-goofy since. Recent twists in my reality are forcing me to change: (1) My work pretty much requires me to live and be happy in the DOS & UNIX environments. (2) I have children that are growing up and ready to start computing. Quite frankly, the Mac never fit either of these situations very well. For serious business applications, the Mac just doesn't have the right combination of power, productivity, portability, and price. As for the kids, well, MacLand is a little thin on educational and gaming, not to mention a rather hefty price for color - which keeps the little tikes' attention.

Anyway, so I've got a Mac SE30 with a 21" monochrome monitor, Laserwriter IINT, etc., along with a small fortune in software and it's not doing me any good at home or office, so I figure it's time to sell off and buy a family machine. From what I read and see, it appears the Amiga is a good choice for a family box. I think I am going to have enough cash after the auction for a reasonable Amiga system and a good software suite.

This brings me to the reason for writing: Realizing that after reading only one .info magazine (and this being my entire view of the Amiga marketplace), would you be willing to recommend a system to me that would fit the following criteria: middle to high-end performance, software and hardware for good color and sound, printer, hard disk, and educational software.

- Joe Azzarelli, CompuServe

Joe, your letter is one of the best arguments we've heard for buying Amiga. We only wish more Mac (and IBM) users would wake up and smell the microchips as you have. The questions you ask are certainly pertinent, but not easily answered. Mostly, the hardware and software you buy depends entirely on what you want to do. You could, of course, order a few .info back issues (\$5.50 each, cash is okay) and look them over for the types of things that appeal to you. In general, a standard Amiga will out-perform a standard Mac. If you want more, invest in a 68020 or 68030 accelerator. You might even want to consider an Amiga 3000. Since you want to expand, by all means go for an A3000 or A2000 rather than the A500. You can expand a 500, but if you already know you want performance, go for the performance machines. You get great color and sound out of any Amiga without additional boards or software, and any printer will work fine. There are a plethora of hard disk drives, including Commodore's own. Broderbund and Free Spirit, among others, publish some very good educational software titles. And we might also suggest an A-Max II from ReadySoft, so you can continue to run all that Mac software you own. By the way, we'll take that 'very nice' as this issue's obligatory ".info is Great" letter.

- Mark & Benn

I know of several pieces of entertainment software that support analog joysticks, but have never seen this type of joystick for sale. Can you suggest anything for me? I'm a new Amiga user, and would like to thank your staff for not forgetting us late-comers. Great mag!

- Tim Russo, Burlington, VT

You've obviously been using too many IBM-type computers to play games on. Amiga software doesn't support analog joysticks for a simple reason: a mouse is a much better input device. Games that on other machines can use an analog joystick, most likely use the mouse in their Amiga versions. We try hard not to forget there are Amiga newcomers; thanks for noticing.

- Mark & Benn



More Toast for Less Bread

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COMPUTER SYSTEM ASSOCIATES

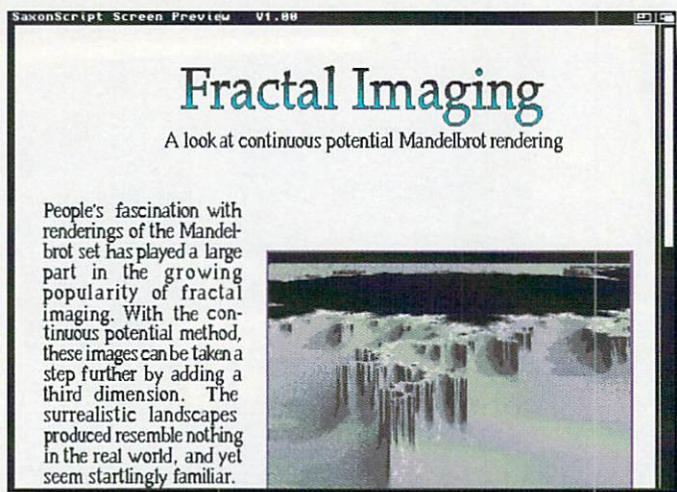
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NEW PRODUCTS



The new *SaxonScript* utility lets you view PostScript files on screen.



ON THE POSTSCRIPT FRONT

One of the choices facing prospective users of page layout software is whether to go with a package that provides output in PostScript format only or one that also supports other types of printers. PostScript is, of course, preferred because of its superior output and its portability. (You can take a PostScript file to a service bureau and have them dump it to anything from a standard PostScript laser printer to a Compugraphic or Linotronic typesetter.) A cottage industry of sorts has sprung up around just such output problems. Saxon Industries has taken some criticism for providing only PostScript output from *Saxon Publisher*, but now they're releasing a stand-alone PostScript interpreter, **SaxonScript Professional**, that will take *Saxon* files and translate them to something Preferences printers can understand. It will even go the other way, providing a method for dumping other types of files to PostScript printers. Specifically designed for low-memory and heavy multitasking, the program includes a set of fonts that are equivalent to most of those found on PostScript printers and will display the PostScript file on your monitor screen (of course, what you see will only be accurate to the resolution of the monitor). Color is supported and it can even take four-color

separations and combine them into a single document for proofing on a color printer. The software will also allow you to take any part of the screen and convert it to an IFF or EPS image. *SaxonScript* operates via a standard Amiga device (PSC:), thus giving it considerable versatility. Price is in the \$130 neighborhood. Saxon Industries, 14 Rockcross Gardens, Nepean, ON Canada K2G-5A8. 613-228-8043.

THE WAIT IS OVER

By our calculations, we've been waiting for about three years for **Superbase Professional 4**, the new incarnation of *Precision Software's* relational database manager, the one we use in-house here at .info. Inter-machine compatibility is one of *SB4's* strongest selling points, which is understandable since it was first released in an IBM version. It is, of course, upwardly compatible with files from previous versions of *Superbase: Superbase Personal, Personal 2, Professional 3*, and is also read/write compatible with *Superbase 2* and versions 1.2 and 1.3 of *Superbase 4* for *Windows*. It also supports IFF, .PCX, and .GIF image files, as well as IFF sound samples. If that isn't enough for you, *SB4* will directly read *dBase* .DBF data and .NDX index structures, .WKS and .WK1 Lotus files, .XLS data from *Microsoft Excel*, and .SPP *Superplan*

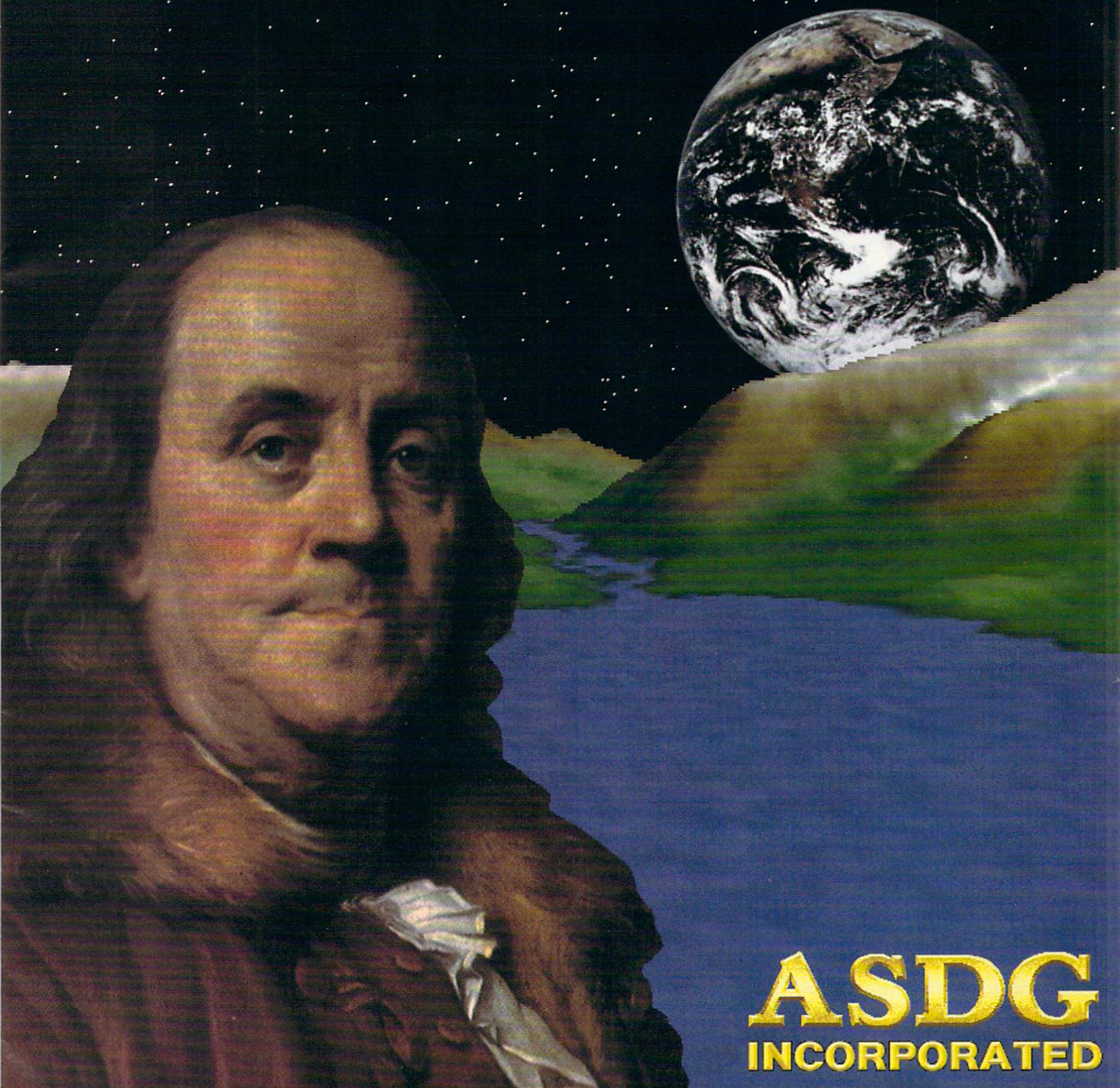
files. (Whew!) *SB4* is *Workbench 2.0* compatible (including 2.0 Productivity mode), and now includes ARexx support, which would make working with all those different file formats a breeze.

Among the more notable items culled from the spec sheet are cross-file lookup and browse, SQL-type queries, output to a new database file including the transfer of data definitions and resolution of relative references, the ability to split or merge data files, and telecommunication support. The forms editor has also been completely reworked and now includes layout tools like rulers, grids, snap-to-grid, and crosshairs. The editor also allows logical form objects and operations such as validation, calculation, command, command buttons, radio button, and a much-needed checkbox. There is also visual flowcharting of the relational joins between files, which will unquestionably make working with several different files much easier. The command language (DML), which uses BASIC syntax and a host of BASIC-like keywords and commands, is also available in a *SB4* runtime version, which means you can design stand-alone applications. Retail price of *Superbase Professional 4* is \$495 and registered owners of *SBPro3* can upgrade for \$149. 8404 Sterling Street, Suite A, Irving, TX 75063. 214-929-4888.

NEW GVP

Great Valley Products has made some significant changes to their **Series II** line of Amiga accelerators. There are three basic models: 50 Mhz, 22 Mhz, and 33 Mhz. The 50 Mhz model is basically unchanged, and the biggest difference from previous incarnations is that the boards now leave the expansion slots usable. The 22 and 33 Mhz models now include an autobooting DMA SCSI controller (the 50 Mhz model has an IDE/AT type controller) and the proper connectors for hooking up both internal and external SCSI devices. Of course, GVP offers the boards with hard drives already installed at, as the saying goes, additional cost. The 22 Mhz model with 1 meg of 32-bit RAM installed

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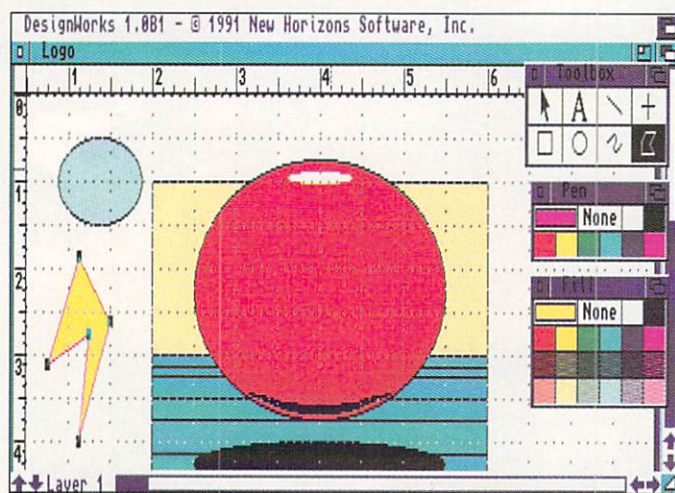
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NEW PRODUCTS



Structured drawings for the rest of us - New Horizons' *DesignWorks*.



(expandable to 13MB) retails for \$1099. The 33 Mhz version, which comes with 4 MB of RAM onboard and is expandable to 16 megs, costs \$1999. Retail on the 50 Mhz accelerator with 6 megs of RAM is \$2999. 600 Clark Ave., King of Prussia, PA 19406. 215-337-8770.

GRAMMAR ARE GOOD

Are you embarrassed by unsightly grammar? Is your verbiage less than perfect? Are your participles dangling? Infinitives split? Then *Soft-Wood* has just the thing for you. **Proper Grammar** will look through about any ASCII document you want to throw at it, check it over for spelling and grammar errors, and then offers suggestions for correcting it. To make using *Proper Grammar* a little handier, it also includes its own built-in text editor so you can write your text, check it for grammar and spelling, and save it in the format of your favorite wordprocessor or page layout software for formatting and printing. *PG* will also analyze your writing seven ways from Sunday, including such things as how many complex and how many simple sentences you used (and whether they're passive or active), as well as how many simple and complex noun and verb groups there are. It will also perform an analysis of your readability based on the Flesch Reading Ease scale and Gunning's Fog Index. The program is based on rules, with 36

classes of them and up to 256 rules per class. Each rule can be turned off (of course, you could always turn them all off and fool it into thinking your prose is perfect), so you can tailor the system to your own particular needs or writing style. Suggested retail is \$99.95. PO Box 50178, Phoenix, AZ 85076.

VIDEO STUDIO

The latest from *Spirit Technology* is their **Studio A** genlock plus encoder plus switcher plus keyer. (Enough plusses for you?) The basic functions of the device include Key (control for dissolving to another video input and/or Amiga graphics), Mix Dissolve (slider controlled for mixing video and Amiga input), Program Cut, Fade to Black, and Key In (the reverse of Key). The unit uses a modular design that will let you add options as you need them. The currently available options include the R-G-B Upgrade (cost \$199; RGB Out, RGB splitter for digitizing, normal/invert video for negatives), Y-C component for S-VHS (\$459), and Computer Control Upgrade (a \$149 daughterboard that provides computer control of all the switching operations). Final pricing hadn't been set at presstime, but *Spirit* tells us the basic *Studio A* should retail for about \$795 for NTSC and \$925 for the PAL version. 220 West 2950 South, Salt Lake City, UT 84115. 801-485-4233.

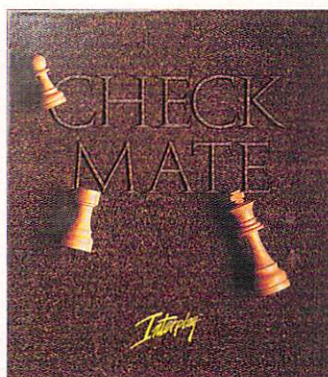
DRAWING

New Horizons is releasing a structured drawing package called **DesignWorks** (originally titled *Graphic Designer*), and it looks like a very practical application for people who don't need the high-powered, complex features of something like *XCAD* or *ProVector*. It has all the features most people need for creating structured drawing for desktop publishing. In fact, it's designed to work with New Horizons' *ProWrite* graphic wordprocessor. It has unlimited layers, bezier curves, definable color patterns, an ARexx port, and text handling that supports any Amiga font. It also has a "high quality" option for dot matrix printer output and will automatically divide large drawings into pages. In other words, *DesignWorks* is the structured drawing package for the rest of us. Price is \$125. PO Box 43167, Austin, TX 78745. 512-328-6650.

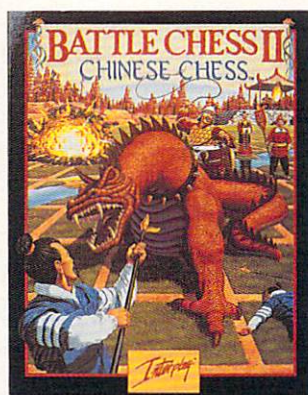
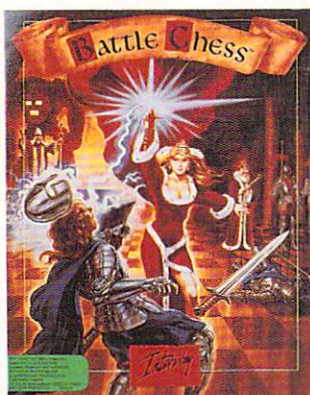
PREFERRED PRODUCTS

There has been a whole slew of new product introductions from *Preferred Technologies*. **Aries** is their memory expansion board (\$169 unpopulated) and will hold 2, 4, 6, or 8 megs of RAM, with the 6-meg option configurable via a jumper as either 2 + 4 or 4 + 2 megs, especially useful for Bridge-Board users. **Nexus-8** (\$299) is a combination memory board (up to 8 megs), SCSI controller, and hardcard. The board uses SIMM modules and claims to work with the *Toaster* and *DCTV* installed. It comes with **FlashBack**, a hard drive backup utility that is available separately for \$79. The software can back up a hard drive to just about any device, including floppies, streaming tape, DAT, optical drives, or another hard drive. It will also handle A-MAX II partitions. The variety of backup devices in *FlashBack* is explained by the fact that Preferred Technologies is also marketing several mass storage devices. The **SideWinder 250** (\$749, uses 250 meg tapes), **500** (\$949, 500 megs), and **1000** (\$2299, 1 gigabyte DAT cartridges) are streaming tape backup units that will

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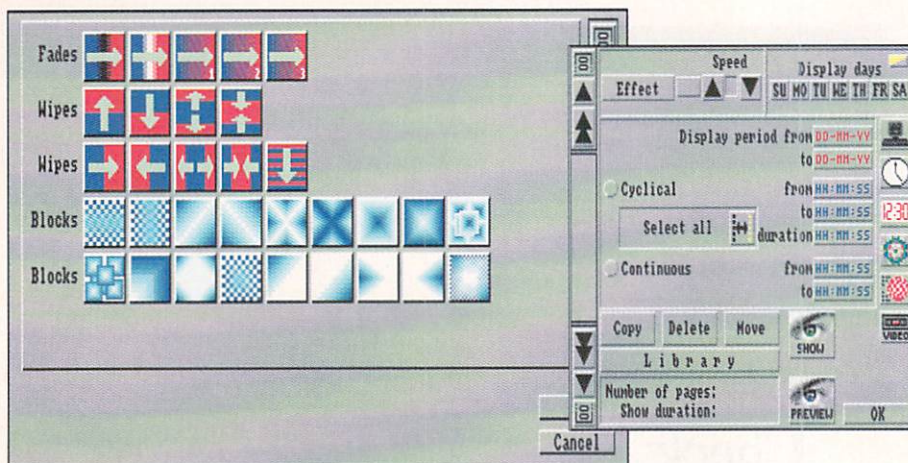
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NEW PRODUCTS



Multi-machine multimedia with CAPS XL.

fit in the 5.25" bay on an A2000. The **HardPack 44** is a removable media hard drive with a 44 megabyte capacity for each cartridge. For \$799, you get the drive and a pre-formatted and partitioned cartridge, which can be made bootable if you want. By the way, the *Nexus* card will automatically detect cartridge insertion and removal. The **Laser-Drive** carries the lowest pricetag we've seen for an erasable optical drive, \$3999 retail. Each optical cartridge can hold up to 650 megabytes of data. If you're finding that you're running out of room inside your A2000, the **SubSystem/SCSI** external chassis might be just the ticket. It has its own 60-watt power supply, internal circuitry for two SCSI devices, and a cable to connect it. It even matches the A2000's case. Price is \$225. On the video front, the company is releasing **Spectrum**, a 24-bit frame-buffer/grabber. It can grab an image in 1/60th of a second (size is 480 x 480) and includes image processing software that can save files in IFF, IFF24, RGBN, or RAW formats. Besides the very reasonable \$699 pricetag, the most unusual feature of the *Spectrum* is its time-lapse mode. You can tell the thing how often you want to grab an image and just let it go to work. Now you can make those wonderful time-lapse movies of flowers growing and opening just like you see on TV. Keen stuff! For more information

on all of these products, which all fit together to make a very useful system for animation and video work, contact Preferred Technologies, 14540 E. Beltwood Parkway, Dallas, TX 75244. 214-702-9191.

FOREIGN WARE

One of the more interesting approaches to desktop presentation is being taken by 1001 *Software Development*. While it's not yet available in the US, the Netherlands company's **CAPS XL** is the first multi-machine multimedia product we've seen. It's designed to be used on networked systems comprised of Amigas, IBMs, and Macintoshes in any combination. The software itself runs on an Amiga, though it can be controlled from any machine on the network. The obvious places to use such a system include airports, hospitals, schools, police stations, real estate companies, museums, cable systems, and so on. The *CAPS XL* system is script-based, which is how it can be controlled by the other machines, and images can be uploaded to and downloaded from the Amiga that's running the show. There are all sorts of bells and whistles to jazz up the presentation, including a text editor, palette tool, image cut-and-paste, and a collection of 50 pre-defined style

sheets that can be modified to suit your needs. This is the kind of thing that will push the Amiga into wider use in the business world and we're glad to see it. For more information, contact 1001 Software Development at "Het Kwakelhuis", Noorderkade 2^G, 1823 CJ Alkmaar, The Netherlands. The phone is 072-114541.

VDE

Commodore is shipping their **A2320 Video Display Enhancer** card for the A2000 series. Retailing for \$299, the card plugs into the video slot and provides de-interlaced video output for your monitor. It's compatible with all existing software (either PAL or NTSC). 1200 Wilson Drive, West Chester, PA 19380. 215-431-9100.

TWO FROM TTR

Hard drive backup and ARexx are two of the most popular software categories lately and *TTR Development* has one of each. **MRBackup Professional** offers the option of compressing files or not, depending on your needs. It will operate with any SCSI device, including streaming tape and DAT, and has ARexx support for further automating and customizing the backup process. TTR states that if *MRBackup* won't work with your particular SCSI device, all you have to do is provide them with information about it and they'll fix it so it does. Uncompressed backups can be read with regular AmigaDOS commands, while the compressed files are compatible with the Un*x file compression program. Also from TTR is **RxTools**, which is billed as an ARexx extension set specifically tailored to working with *Intuition* and the creation of graphical user interfaces (GUIs). *RxTools* includes commands for opening windows, putting up file requesters, gadget requesters, putting borders around windows, making menus, handling text, and so on. Price for each of these packages is \$54.95. 6701 Seybold Road, Suite 220, Madison, WI 53719. 608-277-8071.



ROTOX™

The jolt of the landing jets, a piercing whine rapidly descending in pitch. The troopers off-load. They are Cyborg Class 2-A, approved to carry heavy energy weapons and tactical missiles for off-world combat.

Every battle means fresh new injuries, every lost limb a gleaming cybernetic replacement, to make them better, faster, stronger.

This is the proving ground for Rotox. Specially constructed landscapes in deepest space provide a nightmare environment of deadly machines and hostile life forms. Mistakes are fatal, but success will lead Rotox to the high powered weaponry he needs to escape.

SURVIVE and you will build yourself into a lethal fighting machine. **FAIL** and your soul will wander the galaxy forever.

- 10 levels, each with a different theme which must be cleared before Rotox can proceed to the next level.
- Stunning state-of-the-art graphics and music.
- Initially armed with only a laser gun, Rotox must find extra weapons as he battles through the levels.
- Weapons include scatter-bombs, grenade launchers, jet packs (lets you fly to other sections on the same level, but watch out you don't crash - your fuel is limited), heat-seeking missiles home in on your enemy.
- Features unique 360° rotating landscape technique.

IT'S GOT TO BE GOOD TO BE GOLD!

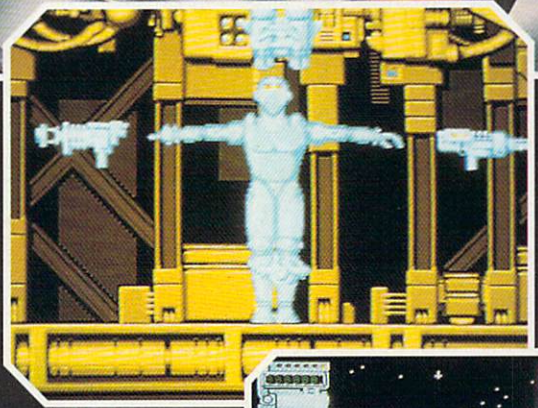
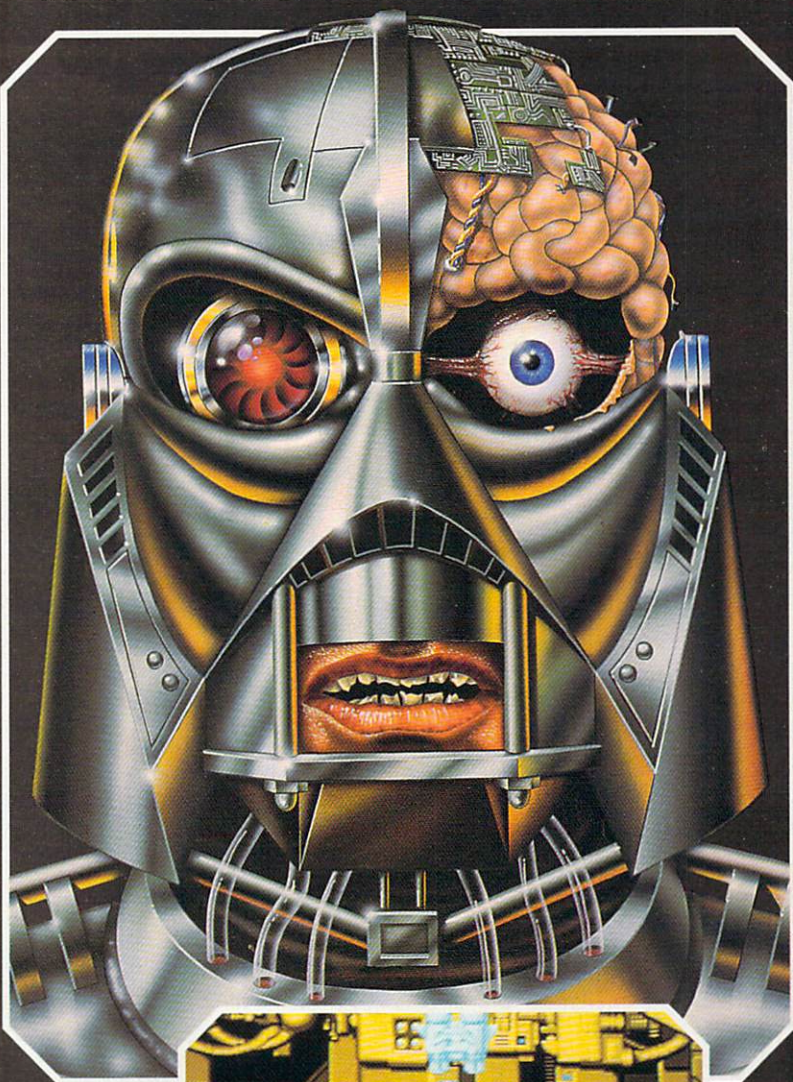


Screen shots are only intended to be illustrative of the game play and not the screen graphics which vary considerably between different formats in quality and appearance and are subject to the computers specifications.

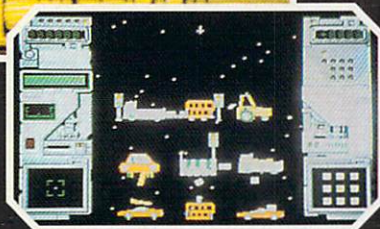
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NEWS & VIEWS

A3000T

We have told you about Commodore's long-awaited 'tower case' version of the Amiga 3000 before, but it will reportedly actually be shipping 'soon'. Beta versions of the unit sport the following features: an expanded set of expansion slots (a 68040 accelerator slot, one overlapping video/Amiga slot, two

Amiga-only slots, two overlapping Amiga/IBM slots, and two IBM-only slots); a 280 watt power supply; five megs of RAM (four megs of 32-bit and one meg of chip); a 100 meg hard drive; a standard 880K floppy; room inside for two full-height or four half-height drives; room for one horizontally-mounted 3.5" drive; room for one horizontal and two vertical half-height 5.25" drives; a front-

mounted monophonic audio speaker; and a keyswitch for security. Also included with the Tower are a new high-resolution two-button mouse and a monitor cable extender.

SERVICE CALLS

For years, Commodore Service has been considered an oxymoron, but it looks like they're finally taking some serious action. They started Commodore Express about a year ago, and now they've added Gold Service to it. Basically, registered Amiga 2000, 2000HD, 2500/30, and 3000 owners who enroll in the free program are promised on-site, next-day repairs for one year from the date of purchase. If something goes wrong, you call Commodore Express and one of their service people will try to determine what's wrong. If a service call is required, they will have someone knocking at your door the next day (on calls received before 4:00PM). Commodore also says they're going to offer an optional extension of the service from 12 to 24 months. If Commodore delivers on this service promise, it sounds like it could set the standard for the entire industry. 1200 Wilson Drive, West Chester, PA 19380. 215-431-9100.

TO MERGE OR NOT TO MERGE

On March 11, Sierra On-Line and Broderbund Software publicly announced their intention to merge. Broderbund was to have become a wholly-owned subsidiary of Sierra, and it all seemed like a good idea at the time. Sierra's entertainment software and Broderbund's educational software (and entertainment titles) would have meshed very well. Then on March 27 the merger was suddenly called off. According to Ken Williams, Sierra president and CEO, it was the result of "disagreement regarding management structure". Broderbund is a privately held company, while Sierra is public (SIER on NASDAQ). Sierra's stock hit 26 1/4 on March 26 and was at 18 3/4 by April 10.

.info UPDATE

✓ About the only complaints anyone has about Psygnosis' *Lemmings* is that it isn't hard drive installable. Well, Psygnosis has been listening and they're offering a version of the game you can put on your hard drive. All you have to do is send them \$5.95 along with your original *Lemmings* disks. Psygnosis told us that this particular title uses a key-disk protection system (you have to insert the original disk for verification, but then you can remove it), but only because it was the fastest way they could offer this option. On future releases, however, they plan to use code-wheels. That's some of the best gaming news we've heard in a long time. 29 Saint Mary's Court, Brookline, MA 02146. 617-731-3553.

✓ Octree Software is shipping version 1.5 of *Caligari*, their raytracing/modeling program. Among the new features are single point editing, Targa support, and an interactive keyframe animation module with B-splines. The database has been re-worked and the interface has a new look and feel with an improved navigation menu. Registered owners can upgrade for \$149. 311 W. 43rd St., Suite 904, New York, NY 10036. 212-262-3116.

✓ Doing business with the federal government is approximately 6.25[^]14 times more complicated

than sending a manned space expedition to Alpha Centauri. But at least the Air Force is trying to make it a little easier. The USAF has set up a new area on GENIE called the 'Air Force Small Business Bulletin Board' (AFSB3). It offers information on what the Air Force is up to (does anyone really know?), what they're buying (do we even have to take the cheap shot about \$5000 toilet seats?), who to contact, and the appropriate addresses and phone numbers. There are also realtime conferences and downloadable marketing reference documents. GENIE, 401 N. Washington St., Rockville, MD 20850. 800-638-9636.

✓ Aggressive Communications (we love the name) is shipping version 3.0 of their *Stock Analyst*. The primary new feature is the Autoloader, which provides the ability to download stock data from online services. The software will track stocks, bonds, commodities, mutual funds, and the major indexes on all the different exchanges. Version 3.0 sells for \$89.95. PO Box 260883, Plano, TX 75026.

✓ In issue #39, we mis-reported the price of *The Mind's Eye*, an innovative VHS videotape of high-end computer animation. The tape is \$19.95, not \$29.95, and is available from Premier Software, PO Box 3782, Redwood City CA 94064, 415-593-1207.

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NEWS & VIEWS

PARTING OF THE WAYS

Commodore and Fleischman-Hillard, their PR agency, have ended their relationship. The association lasted for about four years. At presstime, Commodore had yet to name a new PR agency, and were handling PR in-house for the time being.

SHOW NEWS

The Comdex people are revamping their computer extravaganza, combining Comdex and the new Windows World into SPRING. Being held from May 20 to May 23 in Atlanta, the keynote address on May 21 will be delivered by Michael A. Braun, who is VP of Multimedia at IBM. He will speak on "Expanding Roles for Interactive Multimedia Computing." (Any guesses on how much coverage he'll give the Amiga?) If you're interested in attending the trade-only show, contact The Interface Group, 300 First Ave., Needham, MA 02194. 617-449-6600.

The Hannover, Germany, CeBIT show once again set a record with 570,000 people attending. There were 4600 exhibitors, including 365 from the US, which makes CeBIT the largest computer, networking, and communications show in the world.

ON THE LITIGATION FRONT

Richard Ramella, publisher and editor of *Jumpdisk*, has filed a civil suit to put an alleged pirate out of business. Wisconsinite Richard A. Zeman and his company, Disks & Docs, have allegedly been offering copies of copyrighted software and documentation through a mail-order catalog for the past four years. The list of publishers whose work Zeman lists in his catalog reads like a Who's Who of Amiga, C64, C128, and IBM computing. Publishers wanting more information should contact Ramella at *Jumpdisk*, 1493 Mt. View Ave., Chico, CA 95926, phone 916-343-7658, or the attorney who is handling the suit: Paul Gratch, 30 W. Misslin, Suite 202, Madison, WI 53703. 608-256-3323.

Dr.T's Music Software has filed suit against a California-based company called ICT for alleged copyright infringement and breach of contract. According to Dr.T's president Al Hospers, ICT licensed Dr.T's *Tiger Cub* MIDI sequencing software to include as a part of a bundle with an A500. According to Dr.T's, ICT then failed to pay the agreed royalties and allegedly distributed *Tiger Cub* to major distributors as their own product. Coincidentally, ICT is reported to be the same company that recently took over financially troubled Media-genic.

Illustrating even further the convergence of computers and law, the first-ever World Computer Law Congress was scheduled for April 18-20 in Los Angeles. Some of the topics debated by the attendant lawyers, computer industry executives, and government officials included software patents, international

strategic global alliances, and the problems of doing business internationally. The Amiga community is certainly going to have to pay close attention to what happens along these legal lines. We'll keep you posted on further developments.

SUPERCONDUCTING SUPERCOMPUTING

The April issue of *Byte* reports that Hitachi has developed a working superconducting processor that can handle up to one BILLION instructions per second. The thing has to be kept in liquid helium and runs at a clockspeed of about 1 gigahertz. The prototype chip is 7mm square, uses 4-bit architecture and has 1K of memory, 500 bits of ROM, and only a few thousand devices. Obviously, this prototype isn't terribly practical, but it is certainly a harbinger of the future of supercomputing.



THE RUMOR MILL

DISCLAIMER: The following are among the most entertaining rumors we've heard the past month. They are presented for your entertainment and amusement only. Please do not make any important decisions based on these rumors, as some will prove to be inaccurate or just plain false.

➤ Commodore pulled out of the National Association of Broadcasters Show at the last minute. It's too bad they didn't have an 'official' presence at the biggest show in the nation for video professionals. NewTek, RGB Digital Creations, and other Amiga vendors did a great job of waving the Commodore flag there, however.

➤ Spotted at NAB: A monitor in the Sony booth announced that Sony and Commodore were 'cooperating' to unite a Sony VCR with the Amiga in an editing suite. But the demo showed Sony and Commodore logos

spinning around the screen and uniting in an extremely friendly manner. Remember the rumors we reported a few months back that Sony might be in the mood to acquire a certain multimedia computer company? Hmm-mm...

➤ No word on why Commodore and their PR agency Fleischman-Hillard parted ways, though a source at F-H says they were 'let go' and one at Commodore says they 'resigned the account'.

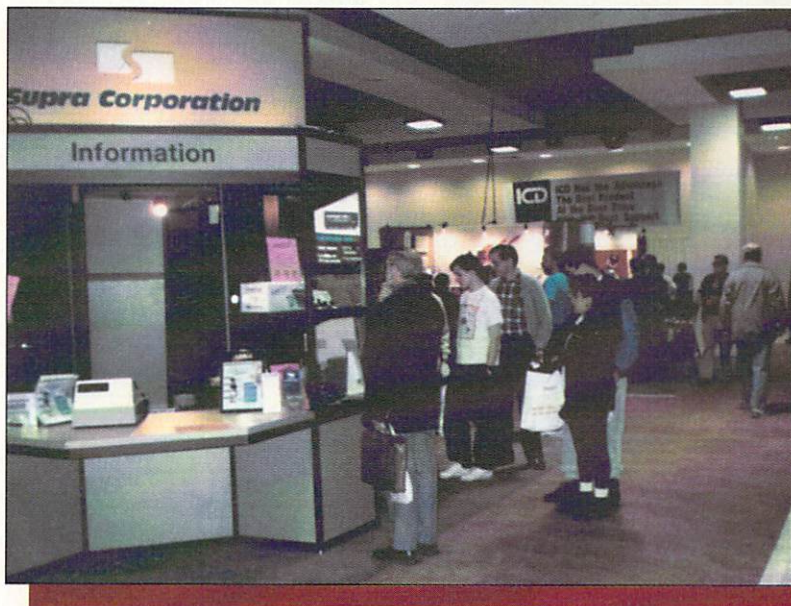
➤ Is it just me, or is the whole first wave of CDTV titles really just... extremely boring?

Amiga World Expo

By Tom Malcom

New York in a mixture of snow and rain is not my idea of a good time. Now that I think about it, New York in any weather isn't my idea of a good time. Even though the skies cleared on Saturday, midtown Manhattan was overrun with St. Patrick's Day revelers, making things even more frantic than usual in the Big Apple. Apparently, a lot of people didn't want to fight either the weather or the crowds, since the aisles at the show weren't exactly overcrowded. Official reports show 11,421 passing through the gate, but the estimates I heard from vendors and others at the show placed attendance much, much lower. A good many of the exhibitors, and there weren't as many of them as there have been at other shows, were complaining loudly about the lack of people. Of course, another reason for the low number of exhibitors could be that Commodore has thrown its support behind the World of Amiga show to be held in New York in early April.

Attendance aside, the overall quality of the show was very good. Those exhibitors who were there were showing some very fine products, with a predominance of them video-related. The biggest surprise was that electronics giant JVC had a booth. Their regional manager told me that it was at his insistence that they had the booth, and it was obvious to him that the Amiga is clearly the computer to watch in the video industry. Corroborating this newfound mainstream interest, I also saw representatives from ABC, NBC, Time, as well as several video magazines, and they all looked alternately curious and impressed when they saw what was being done with Amigas. It has taken quite a while, but it looks as if the Amiga is finally getting some of the recognition it deserves. To give credit where it's due, most of the interest is because of the *Video Toaster*, now the darling of the industry. NewTek had their well-traveled booth set up and was, as usual, wowing the crowds with *Toaster* demos. JVC had some of their new professional-level video decks and video imaging cameras set up, and were also demoing Progressive Peripherals' *Video Blender*, which, despite what you might think, is not competition for the *Toaster*, but can be used in conjunction with it. The most impressive of JVC's cameras is the *KY-15CIBU*, which features RGB, composite, S-video, and component output, along with an input port for a genlock. This 3-CCD camera has a resolution of 668 x 485 and has a built-in zoom lens. Price is \$6395.00. The *BR-S605U* (\$1995) is a new VCR that's specifically designed to use under computer control and features an open architecture to make it very flexible. There are even a couple of plug-in boards available for



Obligatory photo of the main show floor.

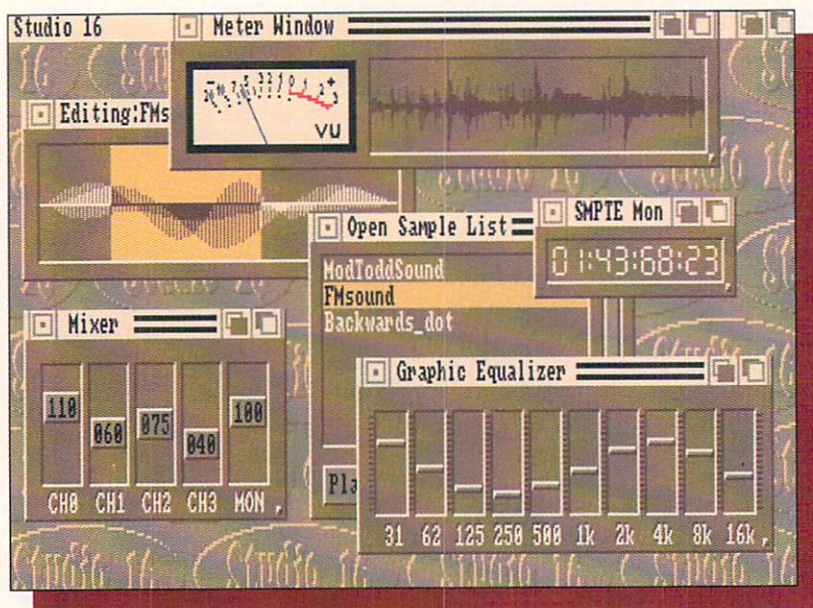
it, including the *SAK17U* (\$350), which provides an RS-232 interface.

As if the presence of JVC weren't encouraging enough, NEC showed their *PC-VCR*. The \$2100.00 VHS device is specifically designed to work with computer control and input. It plugs into the serial port and lets you put index marks anywhere on the tape, which gives precise control for editing. It also has a full-loading transport mechanism that will rewind a standard T-120 tape in two and a half minutes. We'll undoubtedly be seeing many more of these computer-controlled decks hitting the market as Amiga video picks up speed.

Also on the video front, I.DEN was showing their *IVT-7* timebase corrector, running, of course, with a *Toaster*. Even more interesting (not to mention eye-catching), was their *IVW-400* video wall system. You've seen these multi-monitor setups, and now you can have one for your Amiga. Each of the I.DEN units can handle four screens, and you can chain them together for even bigger displays, up to 16 (arranged 4 x 4). There are also all sorts of display options to move the image around, freeze all or part of the display, and other things to blow people's socks off.

Speaking of correcting your timebase, Showline Video has three TBC models, the *Spectrum 500*, *Spectrum 750*, and *Spectrum 1000*. The 500 (\$1295) is a bare-bones single channel TBC with freeze-frame and field with adjustable strobe; the 750 (\$1895) is still

**Attendance
aside,
the overall
quality of
the show
was very
good.**



Sunrise's latest in sound editing *Studio 16*.

This was the first show I've been to that clearly demonstrates the shift toward a video-driven Amiga market.

single-channel, but adds editing controls and effects; the 1000 (\$2695) is the Cadillac model and features dual channel S-VHS/composite A/B roll frame synchronization and editing/effects controls. It should be noted that all three models process the video signals in S-VHS and offer input/output in both S-VHS and composite, depending on your needs. All three work with the *Toaster*, though Showline recommends the *Spectrum 1000*, since it offers more input possibilities.

MicroSearch showed their *ChromaKey* (\$395.00), which is the opposite of a genlock. Instead of putting computer graphics over a video image, a chromakey puts the video over the graphics. If this sounds familiar, that's because this is how TV weather reports are done. It works by making blue transparent, with the computer graphics appearing wherever there's blue; thus, TV weathermen stand in front of a blue screen, making it look like they're standing in front of the computer-generated maps and charts. Of course, the uses for *ChromaKey* aren't limited to just doing the weather; music videos use the technique, and I'm sure we'll see all kinds of keen video once these devices have been on the market for a while.

CSA showed their *40/4 Magnum Accelerator*, which could very well be the last board you need for your A2000. It sports a 68040, room for 32-bit static RAM, and permits four 64MB of 32-bit burst and page mode operations. Price for the board hadn't been set at presstime. CSA also announced a new MMU-less version of their *Mega-Midget Racer* 68030 accelerator at a \$300 price reduction.

California Access showed a couple of new hardware products. They're working on a SCSI controller for CD-ROM drives. It's compatible with standard Mac and IBM ISO discs, as well as SCSI-standard and AmigaDOS hard drive controllers, and the CDFS file system supports High Sierra, AmigaDOS, and ISO-9660 formats. It will even handle multi-disc changers

and will, of course, also serve as an audio CD player. The CA-650 should be available sometime in the second quarter. I also found out that California Access' *Malibu Board* comes with a driver that works for streaming tape machines. They had one set up in their booth and working with *Quarterback*.

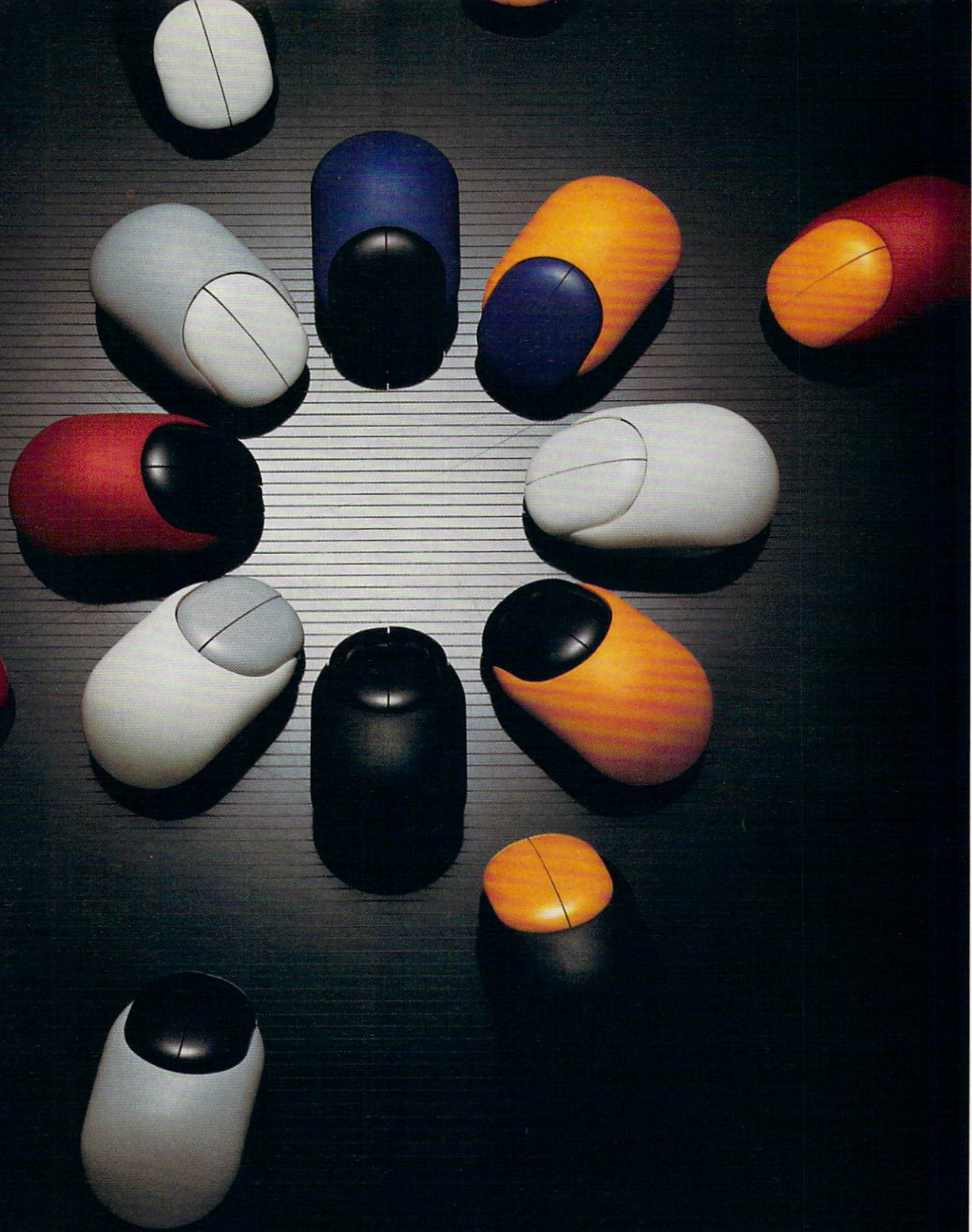
16-Bit sound boards are also starting to show up. SunRize Industries is shipping their *AD1016* board and *Studio 16* sound-editing software bundle. It has a built-in SMPTE time code reader that will help in synchronizing video and sound. The board uses a Motorola DSP56001 signal processor, which is fast enough to perform digital effects like filtering, echo, reverb, and so on, in realtime. There are even MIDI in and out ports. The *Studio 16* software has all the usual editing functions, along with AREXX support, as well as a multitrack SMPTE cue list module, and it has an open-ended design with will permit more modules to be added in the future. All of the editing is performed on a hard disk, thus eliminating the constraints of limited RAM and making possible very long samples.

The other 16-bit board being shown is from Beta Unlimited. *AudioLink* consists of three pieces: an interface card, a stand-alone stereo A-D converter box, and editing software. The hardware can sample at up to 48kHz and there's direct-to-DAT output option. The S/PDIF interface is bi-directional and supports up to 16 voices in mono (8 in stereo) and while it comes with 1 meg of on-board RAM, the board will accommodate up to 16 megabytes. The software looks to be full-featured and will generate 16-bit instruments. It will save in several formats, including AIFF and SAMP.

Keeping up to date with ASDG's *Art Department Professional* is nearly becoming a full-time job. At the show, they announced new drivers for Impulse's *Fire-Cracker*, Progressive's *FrameGrabber*, and loaders for *MacPaint* and *HAM-E* Amiga image files. ASDG is now also supporting the Epson *ES-300C* color flatbed scanner and Kodak's *SV6510* dye sublimation color video printer. By the way, none of these new drivers require a special interface board.

GVP had *Scala* up and running. I first saw it in Europe and have been playing with it for several weeks now. It's still one of the more impressive video titling packages around, with speed and ease of use being its main virtues. GVP also showed off their myriad hardware products, including their 8-meg, half-length RAM expansion card for the A2000 series, removable media mass storage units (removable hard drives, Ricoh magneto-optical, and streaming tape), and Ethernet LAN system.

Also on the hardware front, ICD showed me their new *Novia 20i* hard drive for the A500. The kicker to this one is that it's *internal*; the actual drive is a 2.5" Connor CP-2024, like those used in laptop PCs. While the 20 megabyte capacity might be a little small for some, it's still better than floppies, and with watchful management will be adequate for most needs. I suspect we'll be seeing larger capacity 2.5" hard drives in the near future. The price of this one, which is fully auto-booting, is \$659.



Beetle Mouse

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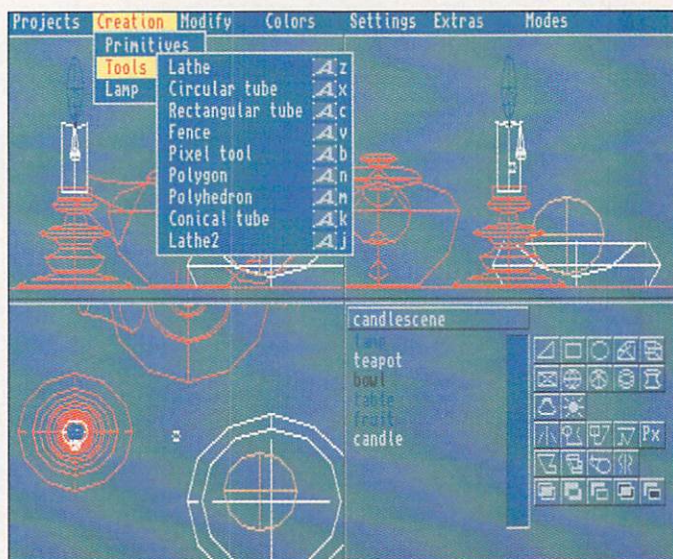
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Circle #133 on the Reader Service Card



Scene and animation editing in *Real3d*.



Besides the interest of the video industry, another encouraging development in the Amiga community is that several European developers are bringing their products into the US market. Aactiva (which is actually a Finnish company with offices in the Netherlands) showed *Real 3D*, which is their entry into the 3D modeling and raytracing field. They're also working on what they call a *Computer Aided Presentation System*, which looks like it will be of considerable interest to multimedia/desktop presentation fans. No U.S. release date or price has been set.

Soft-Logik, the publisher of *PageStream*, has a couple of new products in the wings. *Art Expression* is a structured drawing package that looks like it will be going head-to-head with Gold Disk's *Professional Draw*. Its interface is based on *PageStream* and it is designed to be used in conjunction with it. It supports Adobe Type I fonts, includes all the usual tools and functions, has a genlock mode so you can trace over video images,

will internally autotrace images containing up to 24 planes, and will blend objects (including color and line styles) together with a user-definable number of tweens. Soft-Logik is also working on *HotLinks*, which is a stand-alone program that's a sort of super-clipboard designed to facilitate transferring data between programs. There will be two versions, one for single-user systems and another for networks. The network version is the most interesting, since it would allow one computer to work on a text file, another to edit graphics, and a third put the whole thing together in page layout software (it also has file locking and password protection just to keep things straight). The point to be made about the system is that it is a 'live', realtime one with very fast data transfer rates specifically designed for publishing. It also includes a bitmap editing program (*BME*) and *PageLiner*, a fast text editor designed to integrate with *PageStream*.

There were, of course, many other compa-

nies exhibiting. Briefly, Black Belt Systems has a 9600 baud FAX coming for the Amiga. Oxxi has number of new software titles coming, including a *Visionary*, a graphic adventure game construction system, and *PSTAT*, a statistical analysis program with graphic overtones. Active Circuits, a company doing some very nice things with Sony optical drives, Targa video display boards, and other high-end video equipment, is now doing an Amiga-based teleprompter. Fuller Computer Systems had version 2.0 of their archival *Project D* available. Dr. T's entertained everyone with their music products. InSync showed some of their rapidly growing collection of backgrounds and animations designed for videographers. *Transitions*, as they're called, are designed with color-0 spots for genlocking. There were, of course, many others, but I seem to have run out of space.

If there's anything that stands out about this show, it's that we're in a state of transition. Commodore has thrown its official support behind the Hunter Group's competing World of Amiga shows. They have asked that the word 'Amiga' not appear in the name of this competing show, so 'Amiga-World Expo' will revert to the name 'Ami-Expo'.

This was the first show I've been to that clearly demonstrates the shift toward a video-driven Amiga market. The interest of video equipment manufacturers and the non-Amiga press is very encouraging, but it gives me a little pang of sadness, too. The good ol' days of the the close-knit Amiga community where we had to fight for every scrap of recognition are quickly coming to an end. It looks like we're finally getting what we've wished for.

Next AmiExpo: July 26-28, Stauffer Orlando Resort at SeaWorld.

COMPANY ADDRESSES

Activa International, Keienbergweg 95, 1101 GE Amsterdam, Holland, 31 20 97 00 35

Active Circuits, 1985 Highway 34 A-4, Wall, NJ 07719, 908-974-1616

ASDG, 925 Stewart Street, Madison, WI 53713, 608-273-6585

Beta Unlimited, 87 Summit Street, Brooklyn, NY 11231, 718-852-8646

Black Belt Systems, 398 Johnson, Glasgow, MT 59230, 405-397-5599

California Access, 130A Knowles Drive, Los Gatos, CA 95030, 408-378-0340

CSA, 7564 Trade Street, San Diego, CA 92121, 619-566-3911

Dr. T's, 100 Crescent Road, Needham, MA 02194, 617-455-1454

Fuller Computer Systems, PO Box 9222, Mesa, AZ 85214, 602-497-6070

Great Valley Products, 600 Clark Avenue, King of Prussia, PA 19406, 215-337-8770

I.DEN Videotronics, 9620 Chesapeake Drive, Suite 204, San Diego, CA 92123, 619-492-9239

ICD, 1220 Rock, Rockford, IL 61101, 815-968-2228

InSync, 410 Maple Avenue, Westbury, NY 11590, 516-574-0225

JVC Professional Products, 41 Slater Drive, Elmwood Park, NJ 07407, 201-794-3900

MicroSearch, 9896 Southwest Freeway, Houston, TX 77074, 713-988-2818

NEC, 1255 Michael Drive, Wood Dale, IL 60191, 708-860-0335

NewTek, 215 E. 8th Street, Topeka, KS 66603, 913-354-1146

OXXI, 1339 E. 28th Avenue, Long Beach, CA 90806, 213-427-1227

Showline Video, 120 Beacon Street, Boston, MA 02116, 617-262-6844

Soft-Logik, 11131 F South Towne Square, St. Louis, MO 63123, 314-894-8608

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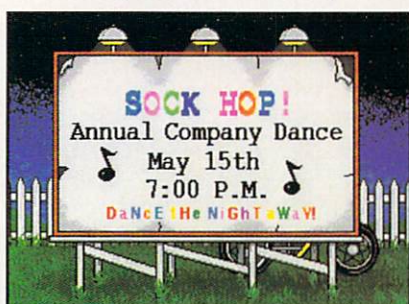
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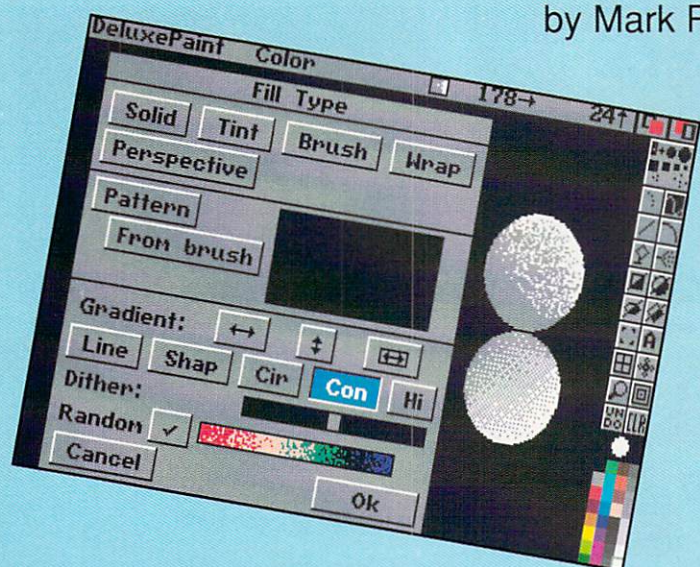
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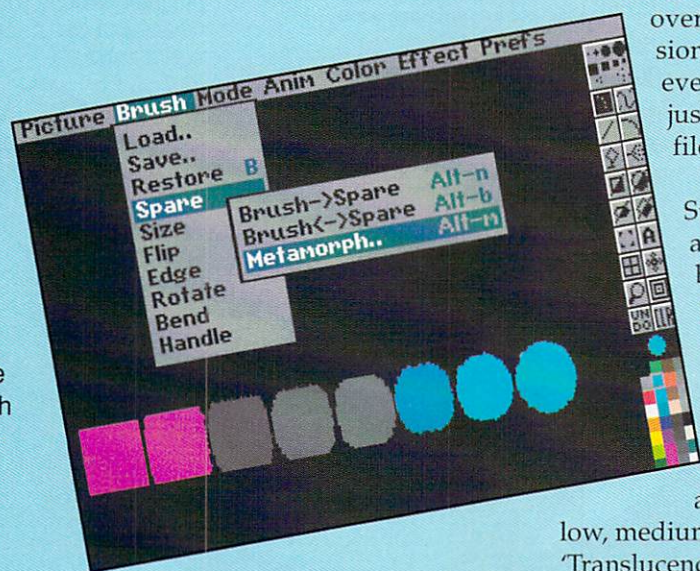
Electronic Arts is about to introduce a new version of the premiere Amiga paint program, *Deluxe Paint*, with many improvements and additions.

PREVIEW: DELUXE PAINT IV

by Mark R. Brown



Several new fills make their appearance on the Fill requester.



Squaring the circle using the new Metamorph function in the brush menu.

The first thing we noticed about *Deluxe Paint IV* is its new 3D 'look and feel'. Gone are the beige color and flat look of the menus and requesters; in its place are grayscale shading and 3D buttons. Except for the 3D effect on the quick menu, the main *DPaint IV* screen is deceptively the same; however, many important additions and changes have been made to the program.

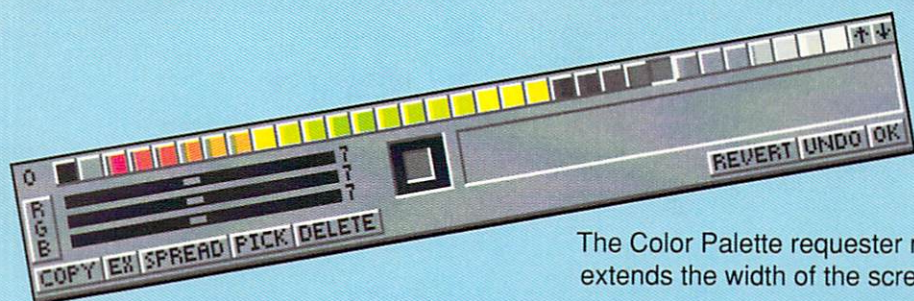
MANY CHANGES

Most everything is changed at least a bit. For example, the LOAD/SAVE requesters now have a 'Disks' button for listing mounted devices and a 'Parent' button rather than a '/Parent' item in the file list window. These appear to reflect an overall philosophy to try to make this version of *DPaint* more standardized. (However, unless things change, you still can't just double-click on a name to load a file.)

There are a plethora of new features. Stencils can now be defined by painting an area, and you can set stencil colors by setting a 'tolerance'. There is a new paint mode called 'MIX' which attempts to mix the current brush color with the colors on the screen. There is a new 'Gradient' requester which allows you to set color ranges and spreads (see screenshot). Anti-alias now can be set in three levels:

low, medium, and high. And there is a new 'Translucency' effect.

Color Effect Prefs



The Color Palette requester now extends the width of the screen.

COLOR, HAM, & FILLS

The biggest change in the menus is the moving of 'Colors' from the first menu list to a menu of its own. This reflects the many changes and improvements in the way color is handled. There's even a whole new color palette requester. Colors can now be mixed to create new colors, and palettes of up to 256 colors can be saved and loaded.

Of course, the major change in *DPaint*'s color capability is the addition of HAM paint mode. HAM mode appears to be modelled after the 256-color mode in the IBM version of *DPaint*, as it gives you a palette of 256 colors to work with.

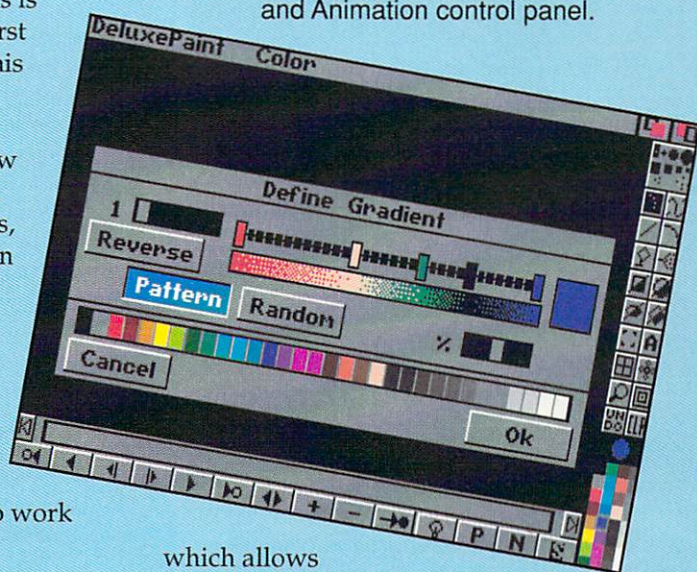
There are five new gradient fills available in *DPaint IV*. They are referred to in the fill requester as LINE, SHAP, CIR, CON, and HI. LINE ignores the shape of an object and fills with a uniform linear gradient; SHAP is also linear, but takes the shape into account; CIR fills radially (it's great for spherical shading); CON is also a radial fill, but the shape of the object is taken into account; and HI is similar to CON, but is optimized for a highlight effect. Dithering can now also be random or ordered, which produces a pattern.

ANIMATION

Deluxe Paint IV now allows you to store and use an alternate brush, so you can swap between two brushes. There is also a new 'Metamorph' function, which creates an ANIMbrush that transforms one brush shape into another over a user-definable number of frames. Colors are also morphed.

Animation has some new features, not the least of which is a new 'lightbox' mode

The new Gradient definition requester and Animation control panel.



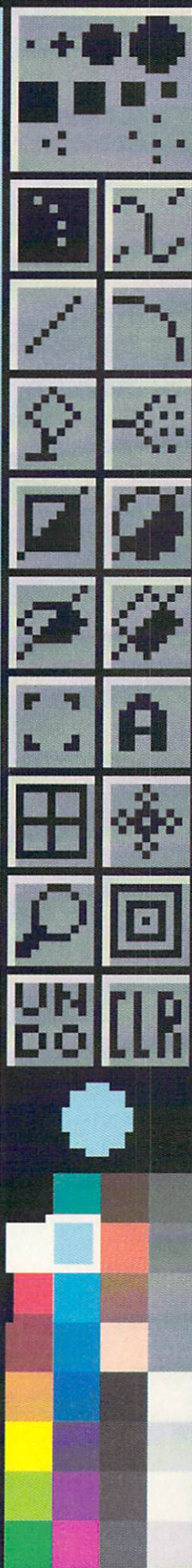
which allows you to view the next and/or previous frame simultaneously with the current frame. A new animation control panel (see screenshot) gives you control over lightbox functions as well as providing VCR-like controls for playback.

CONCLUSION

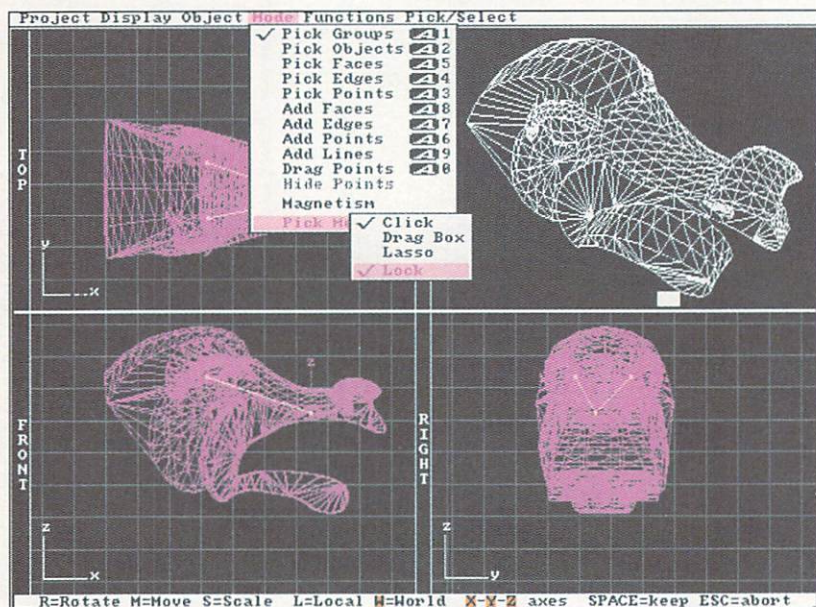
Deluxe Paint IV retains the familiar feel of previous versions, while adding a new 3D look and many new and important features. HAM support is certainly a welcome addition, and the new color options, animation tools, and special effects should prove to be powerful additions to the Amiga artist's toolbox.

At presstime, no information was available regarding pricing or update policies. It will be available August 2nd.

This preview is based on our experiences with an alpha test version of the software. There are bound to be some changes before it is released to the public.



Brad Schenck on Graphics



The Detail Editor's four-view screen includes a Perspective display (upper right), which here is set to redraw in filled wireframe.

Brad completes
his two-part
look at
Impulse's
impressive 3D
rendering
program
Imagine.

Impulse's *Imagine* didn't spring, like *Athena*, fully grown from the heads of its designers. It's clear that the program was grown from the fertile ground of Impulse's previous 3D rendering and animation software. That earlier product was *Turbo Silver*, well-known for its powerful controls over surface properties of 3D objects, sophisticated modelling techniques, poor documentation, and a user interface that could frighten even the stoutest of heart.

Imagine is far from being a revision of *Silver*, but does conform to some of *Silver*'s better conventions. The entire structure of its interface is changed, and the object and animation editors (see last month's issue for a blow-by-blow account of these) are far more accessible than *Silver* ever was. The several editors have the same appearance and many features in common, making one's travels between them quite simple. In addition, there are a wealth of features never seen in *Silver*, and the process of building animations is much easier and more powerful.

Imagine's single floppy disk contains both integer and floating point versions of the program in compressed form, with an installation program for moving the appropriate version to one's hard drive. I had difficulty getting this program to work from the Workbench (though it installed correctly when started from a Shell or CLI). Once installed, the program, textures, and special effects all appear in a single directory.

OBJECTS

Unlike *Silver*, *Imagine* stores only a single version of any one object on disk. Changes to a scene or object during an animation are controlled through a 'Staging' file created by the Stage Editor. This means that animations will require far less storage space for object data than *Silver* users expect. A change to that one stored version of an object immediately takes effect in a rendering project, since *Imagine* loads objects from disk prior to rendering them, or when going from frame to frame in the Stage Editor.

Rendering 'subprojects' enables a user to maintain several different sets of images from the same data. It's possible to have, for example, a filled wireframe version, scanline (solid modelled) version, and a fully raytraced version of the same project at the same time. This makes switching between rendering modes a simple matter. Typically one would work with the faster rendering modes whenever possible while working out the layout of an image or animation, doing the final, fully rendered version only when the rough design stage is finished.

EDITING

Imagine's object editors are the great joys of the program. Just about any type of object, group, or point editing is available using the mouse or by entering exact numbers in requesters. There are a variety of extrusions (including extrusions along paths) and lathing operations, and options that affect the performance of each; the 'Slice' feature makes it possible to carve the shape of one object out of another; and the choices of surface attributes outshine the power of *Silver*. Multiple 2D images or volumetric textures can be applied to an object, and image maps can be applied for color, altitude, reflectivity and transparency.

Object attributes (though not image and texture maps) can be loaded and saved, so that a user can build up a library of preconfigured surfaces like chrome, quartz, and so on.

Animation control is offered through two different interfaces. The graphical Stage Editor resembles the object editors in its four-window layout (any one of which can be expanded to a full screen), and animations can be previewed in wireframe without leaving Stage. Here a user can move, scale, and add items through a mouse-driven interface, but not all of *Imagine*'s morphing (or tweening) abilities are available. Light sources can be added in Stage, but their properties aren't editable here. It's in *Imagine*'s Action screen that all the animation features are really available.

The Action screen is a chart-like timeline of all the events in a project. Here 'Actors' represent characters in the sense that an Actor may be an object, one object changing into another, a Cycle object (a group of objects whose motion is designed in *Imagine's* Cycle Editor), light source, camera, or Globals, which control the properties of the universe itself.

Practically anything can be morphed or tweened in the Action screen. Shapes, colors, sizes, alignment and positions can each be changed during the animation, and all might be changing at once. 'Special Effects' are external modules that can be applied to Actors; as shipped with version 1.0, these include 'Explode', which can make an object's polygons explode away from its axis with or without tumbling and spinning, and 'Ripple', which disturbs the surface geometry of an object with configurable waves - this is similar to the dramatic renderings of the 'water tentacle' in the film *The Abyss*. Only one Special Effect can act on an actor at once.

The Action screen is the hardest part of the program to learn; it's very different from the other modules, which all look basically the same. Once one grasps the way the Action screen works, though, it is invaluable.

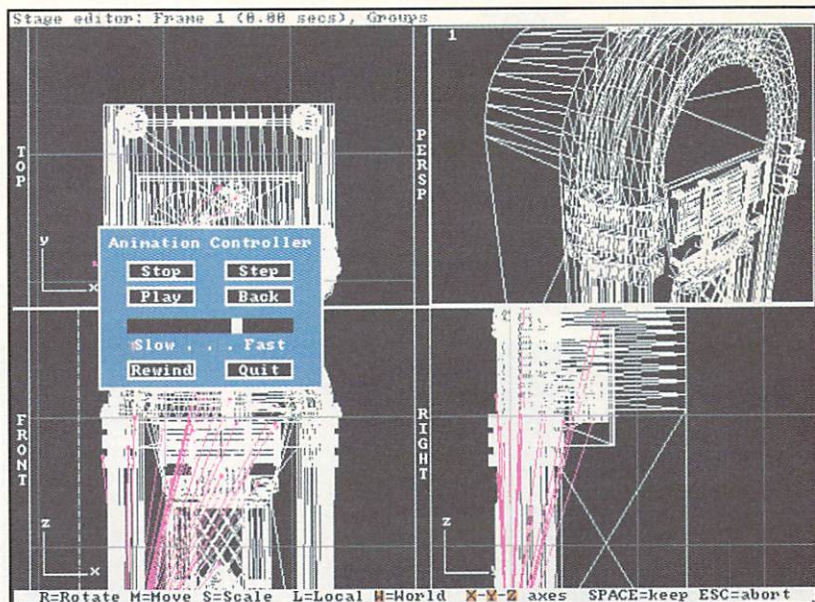
Imagine's Cycle editor - while a little picky about the way component Cycle objects are designed - is uniquely suited to animating walk cycles and other character animations. Since it allows one to assign objects and groups of objects to be linked, then moved into position in keyframes, it's a very useful editor for creating all sorts of cycling motions. Apart from the obvious walk cycles, Cycle is also well suited to complex mechanical motions like pitman cranks and pistons, which are very difficult to create with simple hierarchical groups. These cycling groups can be imported directly into an animation in the Action screen, where one can set the number of frames a cycle should occupy, how many cycles to repeat, and on which frame of the cycle motion should begin. It's possible to create a walking character and practically turn it loose to wander across a scene, or along a path.

QUALITY

Rendering quality is quite good. *Imagine* offers rendering modes from simple wireframes through filled wireframes, to solid modelled images and finally full raytracing. (It's only in trace mode that images use true shadows and reflections, though the scanline mode will do environment mapping to simulate the latter.) Image formats include standard IFF HAM and 24-bit images, as well as Impulse's own 12 and 24-bit image formats. ANIM files (or Impulse's own animation format) can also be created.

CAVEATS

Most of what we've seen so far has been impressive. As usual with an initial release, though, there are a few rough edges. First off the manual - while somewhat better than the *Silver* manual - isn't up to the complexity of the program. Its first drawback is the lack of an index, which is fundamental. Beyond that, its few tutorials are sketchy and the reference manual



Within *Imagine's* Stage Editor, a user can preview any sequence of an animation.

(which is separate) is all too full of feature descriptions that raise more questions than they answer.

In version 1.0 there are intermittent problems with shading and morphs. Occasionally, one or more faces of an object will render as pure white or black, and there doesn't seem to be a way to correct them. This happens less often with faceted than with Phong shaded surfaces. Sometimes after setting up a morph in the Action editor, returning to Stage will show the object's axis placed correctly, while all the points and faces have moved mysteriously to some other place. This can often be gotten around by moving the object again manually, then selecting 'Go To' the current frame, and finally replacing the object where it was meant to be. These two problems are occasional but very awkward, and Impulse promises fixes for them as well as additional features in an upcoming (free) upgrade to *Imagine*.

Rough surfaces can't seem to be prevented from changing their appearance from frame to frame in an animation; this was preventable in *Silver*, but apparently not in *Imagine*. The symptom is that surfaces with roughness seem to crawl if animated.

A few nice features in *Silver* haven't been recreated. Some include: setting objects to be 'Bright', having image maps repeat infinitely on ground objects, and the ability to change the anti-aliasing or 'Edge Level' value within the program (this is now controlled by a .config file, so that *Imagine* has to be restarted to alter the anti-aliasing level).

When the above problems with shading and morphing (and whatever other bugs may be lurking under *Imagine's* texture-mapped carpet) have been fixed, the program will be much improved. Even so, version 1.0 is a powerful 3D tool, and has great promise for the future. The learning curve is much easier than *Silver's* ever was, despite the weak manuals, and the results are worth working for.

Imagine v1.0

★★★★

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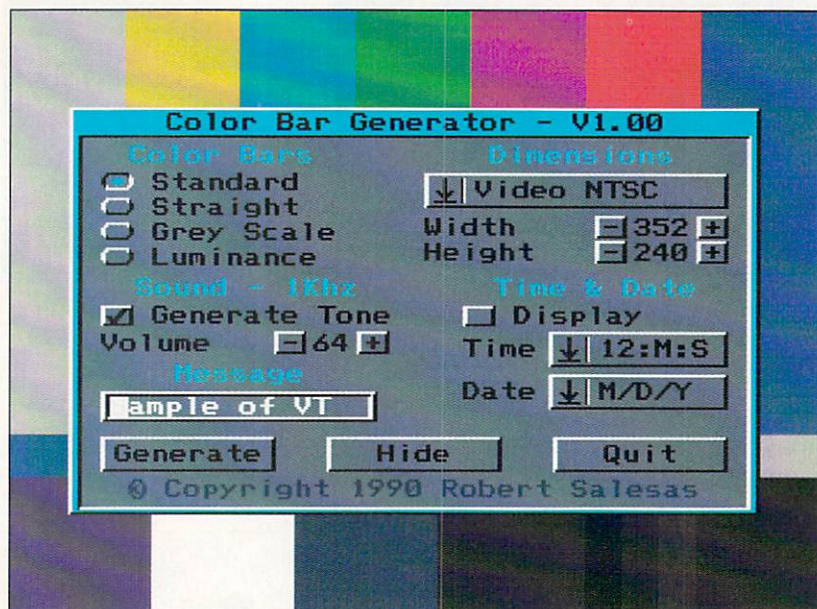
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takes a stroll
through
Video Tools
from Eschalon
Development.

Eschalon Development's *Video Tools* is a package of several programs intended for the video professional. The number of programs included in this collection is so great that they wouldn't all fit on one disk without compression. The Install program on the disk copies the programs to your hard drive (or to floppies) and decompresses them in the process. The programs are divided into several drawers titled Brushes, MultiMedia, Presentation, Utilities, Generators, and Titlers. A second disk contains a large selection of fonts and ColorFonts.

TITLERS

The most interesting drawer contains the titlers. You'll find a Scroller, a Crediter, a Prompter, and a Subtitler! The first two do the usual titling jobs of moving text up and across the screen. The Crediter (not named for those guys who keep knocking on your door) is used for scrolling program credits up the screen and will repeat its sequence after a preset delay (if selected). The Scroller program crawls text across the screen a la weather warnings and news updates. Both programs use standard ASCII text files such as those output by ED or any wordprocessor that can save in text only mode. The font size,

style, and color can be specified, although you can only choose one per job. You may also select whether the text should be Bold, Italic or, more importantly, Shadowed, Outlined, Anti-aliased or any combination thereof. The speed of the display is preset before it's started. (These options are common to all the titling programs.)

The most exciting programs are the Prompter and Subtitler (Eschalon isn't known for creative program names). Both are rare in the world of Amiga. There are very few Amiga programs that allow for Teleprompting and none, save this one, for Subtitling.

Teleprompting used to be done at television stations by aiming a black and white camera at a conveyor belt with pages of typewritten text laid on it. The speed of the belt could be varied by the actor, which thereby varied the speed of the text display. The text was often edited on the fly by simply removing a page or two and replacing them with other text pages. More recently, personal computers have been used to generate the text display. Many programs have used PC clones, Commodore C64s and Tandy portables, but none used the Amiga until now.

The Prompter uses standard text files, as mentioned above. To make the Prompter recognize specific sections of the script you place cue markers, the @ symbol followed by a number. If this is found at the beginning of a line, the program can skip straight to that point by pressing the TAB key and then entering a number. The display changes to the new piece of text for the actor to read. Up to 999 sections of script can be cued. Comment lines can be added by preceding them with a semicolon. A sample of text prepared for the Prompter is shown below.

@1 Hi friends! It's springtime and you need a new car! Well ol' Bob is ready to sell you one for the low, low price of
; make a dramatic pause here
@2 only \$2995! That's right \$2995! But only if you act today.

Any prompting program worth its salt allows the text display to be sped up, slowed, or even stopped to accommodate the needs of the actor. It's rare that a script is read at one set speed. The delivery styles of different personalities force a teleprompter operator to continually adjust the display speed. The

Prompter can be sped up or slowed down while running by pressing the + or - keys. The default speed is set prior to starting the display.

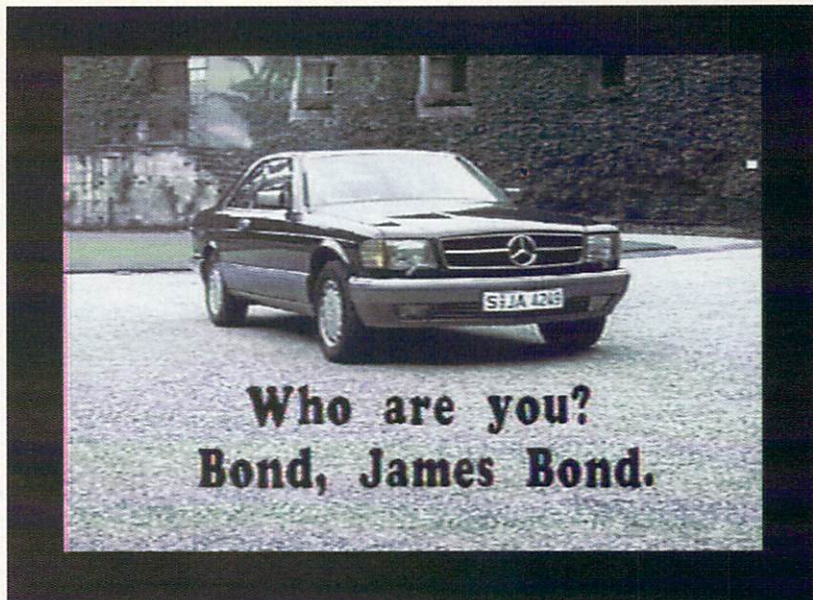
The beauty of having a PC-based teleprompter is that you can easily use the same text file you created when writing the script, cutting down on the amount of work necessary. But what about tying up your Amiga when using it for prompting? Well, I think that if you carefully examine your usage of your Amiga, you'll discover it's used more often for graphics during the post production phase. That means it's probably free during the initial production tapings.

The Subtitled is of little use to most of us. At least that's what you'd think, but my experience has shown that there are a great many Amiga owners who need to subtitle American movies and educational films for minority groups, be it Vietnamese, Chinese, Latino, or in the case of my last contract, Chilean. The Amiga is an obvious choice for subtitling, but the software to do it has not been quite there. The problem is how to use a standard titling package to do two hours worth of film? With Subtitled it's easy. Just take your program script (how you come up with this is your problem) and embed the @ symbol at the beginning of each line. If the lines are too long, they will be chopped off, so you may have to break up a line or two as necessary. Once running, the Subtitled will display each line after a mouse click or pressing the Return key. Since the actual display information is in a text file, very little memory is required to do large amounts of subtitling. There is little need for large amounts of storage for files, either. Again, the text is displayed according to the styles, sizes, and colors of fonts that you have chosen beforehand with shadows, outlines, and anti-aliasing. One of the nice features all the *Video Tools* programs share is that whatever options and choices you select, they are saved to a config. file when you exit the program. The next time you start the program, your last settings magically appear. This process is automatic and involves no effort on the user's part.

OTHER TOOLS

There are many other programs in the *Video Tools* collection. One pair is for use in making multimedia presentations. Ascension will display IFF files and animations, and also play sound files in whatever order you determine. The presentations can be interactive and/or self-running. Ascension has a point and click interface, but creates a script file that is editable, giving you fine control over your presentation. The companion program is called VT Presenter and is a special version of Ascension that doesn't use a script file, but gets all of its commands from AREXX. That way it can be used with most everything that's AREXX compatible.

There are still many other programs in the *Video Tools* package but we're running out of space so I'll just mention one more. My favorite is a simple program that does nothing but put up a title screen with



Subtitling with *Video Tools*.

my program's info on it. You know, things like Title, Talent, Director, Date, Time, etc. I know it's silly but I get tired of running *Deluxe Paint* or *Pro Video Post* for something as simple as that. *Video Slate* does it simply and quickly, and the date is called up from the computer's clock so I don't even have to get out a calendar.

CONCLUSIONS

Video Tools is an interesting collection of very functional programs for specific video uses. Although the manual is a bit skimpy, the programs are easy to use, almost making the manual unnecessary. Copy protection consists of an owner's serial number, necessary to decompress the files before installing them. The programs themselves are all quite easy to use. Several of them give you optional display sizes. Some of these don't appear to offer interlace modes, but Eschalon tells me that those screens are forced into interlace upon being shown. That would make for smaller files and fewer memory requirements. *Video Tools* only requires 512K to run any of its programs.

The idea of an AREXX-only program is tantalizing, and the Subtitled, if needed, would be worth the cost of the entire package. The Prompter has already found use in my studio, and as long as I'm lazy I'll be using the *Video Slate* program. If these applications are part of your everyday needs, then maybe you could use *Video Tools*.

ADDRESS

Eschalon Development, 110/2 Renaissance Square,
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Video Tools

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Commodore's CDTV



GETTING ONLINE

There's no manual with this thing, just a tri-fold sheet called "Hookup Instructions". I follow them, then hit the front panel power switch. The screen lights up, so I must have done it right. The screen displays a rotating "CDTV" logo. Cool. There's a "Welcome Disk", whatever that is, so I stick it in the slot to see what happens. After a brief look at a different CDTV logo, disembodied voices start telling me about CDTV. They take me through the CDTV unit's functions step by step, with graphics to illustrate most of the points. The voices sound like they're on heavy doses of Valium. I nod off a little, but learn most of what I need to know. They even explain the CD "caddy" you have to use when you stick a disk in the player. The disk is informative enough, but I can't help thinking that some flashy demo animations and a soundtrack with a good beat would have livened things up a lot. And I can't help thinking I'm going to want to refer to a manual later, and I don't have one.

AUDIO

Well, this thing is supposed to play audio CDs, so I stick one in a "caddy" and pop it in. It sounds fine. Hmmmm... the front panel and remote can only do play, pause, skip ahead, and skip back. To do the fancy 'shuffle play' and 'play loop' and other fun things, you have to use the on-screen display. You can play CD+G disks, it says, so I stick in a Fleetwood Mac CD+G disk; it displays the lyrics and some pictures in a slow slideshow. I don't think "+G" is enough to get excited about.

I think about how a single-disk CD player with pretty much the same audio functions can now be had

for about \$99. CDTV lists for ten times that. Of course, it's much more than just a CD player...

HARDWARE

I like the remote. I didn't think I would. It's like a Nintendo remote (I'm told - I don't do Nintendo) with a numeric keypad.

I look on the back of the CDTV unit for the computer connectors I know are there, and find a couple of extras: TV, composite video, and MIDI in and out. (They tell me the MIDI ports can be used with "CD+MIDI" disks, among other things.) I look for the keyboard, drive, and mouse connectors, because I understand that with these extras you can turn this thing into an Amiga 500. The disk drive connector is standard, but... what the heck are these tiny little DIN plugs? Has Commodore actually CHANGED THE CONNECTORS for the keyboard and mouse??? Shades of the Plus/4, they have! This is very short-sighted.

And why did Commodore put that memory card slot on the front panel, when a built-in disk drive would have been much more useful, and probably almost as cheap? Commodore says they were afraid of "scaring non-computer users". Personally, I think they'll be much more frightened by the concept of having to stick a CD into a "caddy".

SOFTWARE

Among the seven CDTV titles that Commodore's PR agency sent along, only *Time Table of History: Science and Innovation* (Xiphias) is much worth talking about. It takes full advantage of the CD-ROM format, with digitized pictures, animations, and audio, and cross-indexing by keywords, timelines, and word-search. Otherwise, it seems to me that most CDTV developers just don't "get it" when it comes to understanding what CDTV is good for.

IMPRESSIONS

CDTV is a good concept - maybe even a great concept. It could have been a contender. But there are so many shortcomings: the required CD "caddy"; no manual; the memory slot instead of a disk drive; the non-standard mouse and keyboard connectors; the unavailability of a compatible CD-ROM drive for Amiga owners; and the general poor quality of the first wave of software. Combine all that with a high pricetag (\$999 list) and Commodore's "marketing strategy" - which is to hide the fact that there's a real computer inside the box - and I'm afraid you have written a formula for failure. I still like CDTV very much, and I want it to succeed. But in the face of all those difficulties, I sincerely doubt that it can.

This was a
busy month to
start with.
Then CDTV
showed up.
Here are
our first
impressions.

by
Mark R.
Brown



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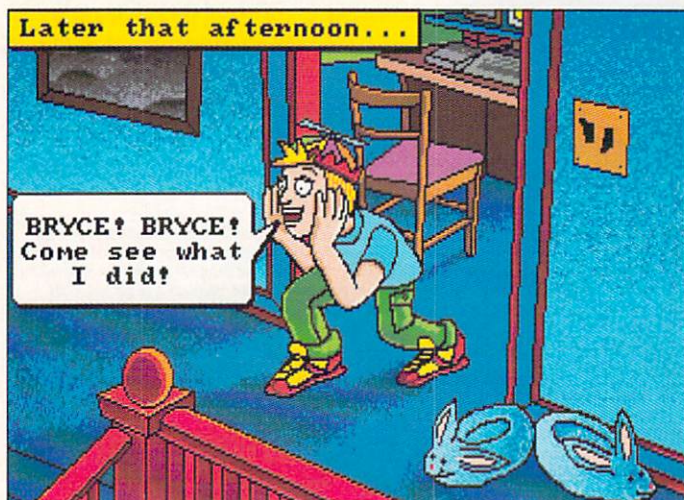
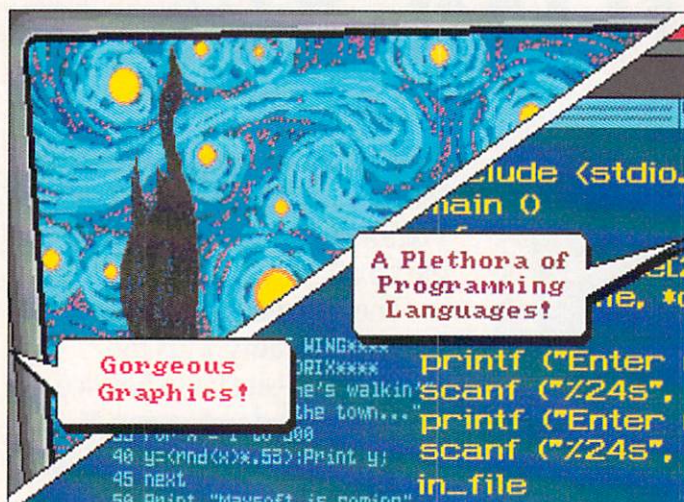
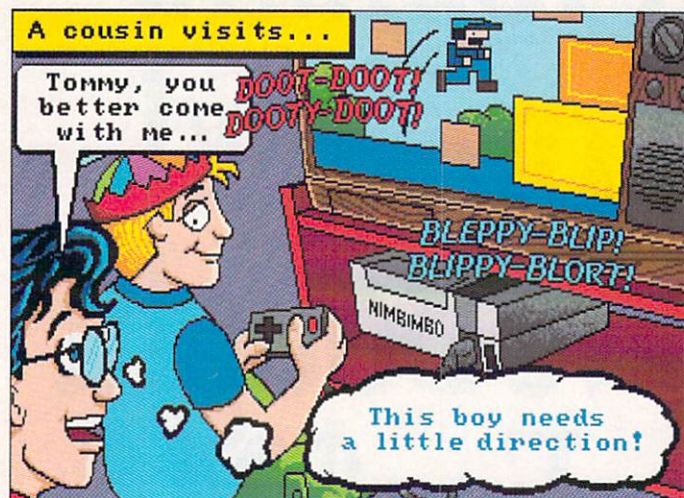
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BRYCE

"THE VISITOR"

BY GREGORY CONLEY



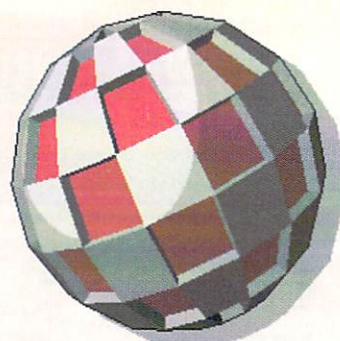
Gregory Conley can be contacted by writing: Gregory Conley, 17320 Laverne Avenue, Cleveland, Ohio 44135

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CyberPlay



Incredible
★★★★★

Very Good
★★★★

Average
★★★

Awful
★★

Drek
★

Ranking right up there on the top shelf with other classic, addictive games like *Arkanoid*, *Shanghai*, and *Tetris*, *Pick 'N Pile* has accounted for more wasted hours around my house (and, truth to tell, in my office, too) than anything in the past couple of years.

Pick 'N Pile is most similar to a pachinko machine, an oriental form of pinball played with hundreds of little steel balls. At the beginning, a bunch of different colored balls drop down from the top of the screen, along with several other types of things. The object of the game is to pile like-colored balls on top of each other. If you do, the whole row of them disappears. There are other objects as well, like score multipliers, time extensions, blocks that can be piled up in columns to support higher stacks of balls (the balls will roll and fall if they aren't supported, and the more you can stack up, the higher your score).

I absolutely love these games that let me turn off my brain and veg out in front of my Amiga; pixel Zen, I like to call it. If you like mindless pursuits as much as I do, don't miss *Pick 'N Pile*.

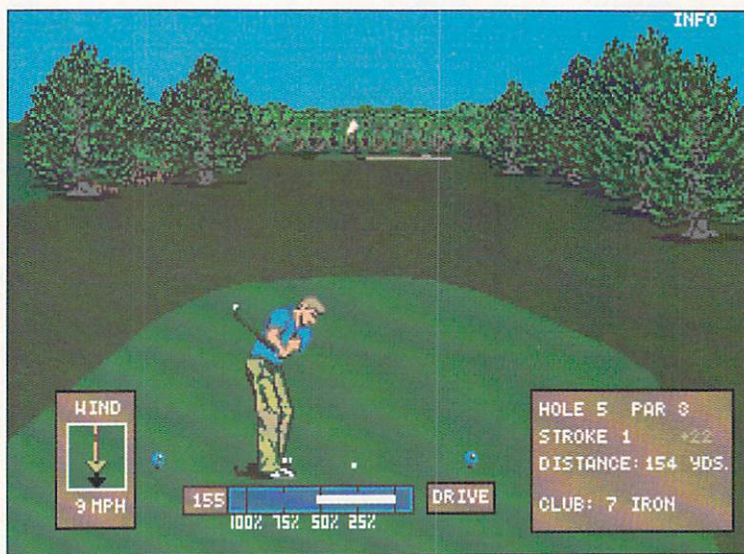
- Tom Malcom



PICK 'N PILE



UBISoft / EA, 1820 Gateway Drive
San Mateo, CA 94404, 415-571-7171



PGA TOUR GOLF



Electronic Arts, 1820 Gateway Drive
San Mateo, CA 94404, 415-571-7171

For several years, *Mean 18* was the only golf simulation I'd play. Then, a few months ago, I switched to Accolade's *Jack Nicklaus* series. Now I've become a *PGA Tour* convert.

Above all, *PGA Tour* is fast; I don't have to wait around for more than a couple of seconds for the screen to redraw. The graphics are only a little better than adequate, though I really can't complain about them much, and the sound effects are appropriate and well done. What I like best about *PGA Tour*, though, is that I can determine the level of feedback it gives me. There are options for showing an overhead view of the hole after each shot, for telling you about your lie, and for displaying a wireframe contour map of the green. All of them can be manually called up or set to come up automatically after each shot. By turning everything off, I can play as fast as I can hit the ball, calling up detail only when I need it. My only wish is for more courses (an inevitability) and a course designer.

If you've been looking for a golf simulation you can really play, *PGA Tour* is the one to buy.

- Tom Malcom

The full title of this new graphic adventure by Steve Cartwright is *Les Manley in Search for the King*. The 'King' of the title isn't the sort who sits on a throne and wears a crown, but the type who sings in Las Vegas lounges and wears big-collared white satin jumpsuits studded with rhinestones and sequins. Presumably the first of a series, the game casts you as a dweebish clerk (he looks like Don Knotts' younger brother) who is attempting to find the legendary entertainer in order to win a million-dollar prize.

Search for the King is clearly going to be competition for some of Sierra's games and uses much the same sort of player interface. The graphics, thankfully, don't have that typical IBM look of most conversions and, in fact, are nicely done. The beta version I've been playing is easy to navigate and movement is fairly quick; it's also installable on a hard drive and, since each location must load from disk, playing from hard drive is almost a necessity. The game is laced with humor, skewering the media in general and Elvis sightings in particular. *Search for the King* looks like great fun.

- Tom Malcom



SEARCH FOR THE KING

Accolade, 550 South Winchester Blvd.
San Jose, CA 95128, 408-985-1700

Preview



SKI OR DIE

Electronic Arts, 1820 Gateway Drive
San Mateo, CA 94404, 415-571-7171

Preview

I haven't seen anything like this since the long-gone days of Epyx' collections of weird sports. This one revives the genre with five snowbound events. Besides the inevitable downhill skiing, there is snowball fighting, innertube thrash, ski jumping, and snowboarding (sort of like skateboarding on snow). You can participate in any of the events individually or do the complete competition.

There is a definite Nintendo feel to *Ski or Die*, as there should be, since it's also been released for NES. The graphics are okay and the music better than average. Control is all by joystick and the response is very snappy. Learning the joystick movements is fairly easy, unlike some of the contortions required in the old Epyx games. Of the events, I like the snowball fight best; if you miss one of your opponents, a snowball splats against the inside of your screen.

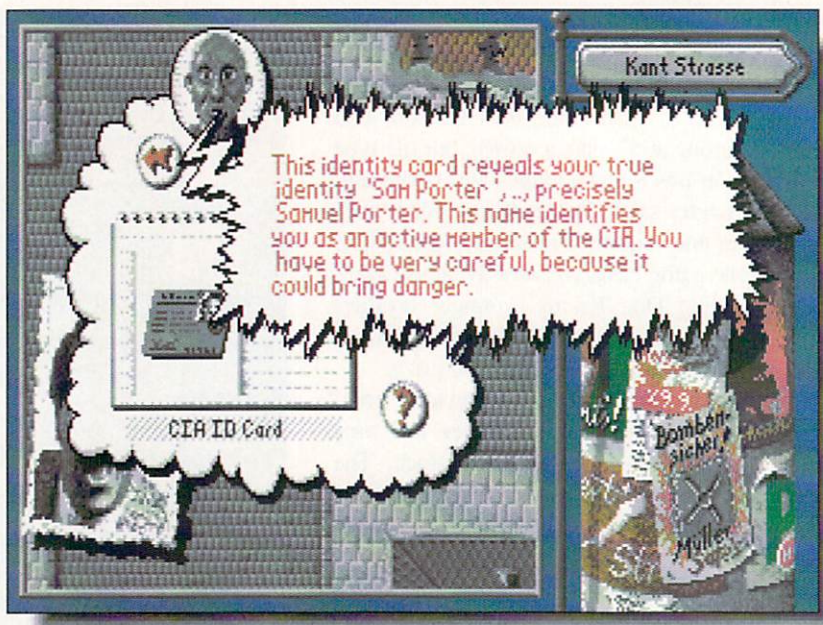
Overall, *Ski or Die* has a very Junior High feel to it, which isn't necessarily a bad thing. I've had lots of fun with it and besides, being a snow-hater myself, *Ski or Die* lets me play without wearing a coat or getting my toes frostbitten.

- Tom Malcom

Set, obviously, in 1948 during one of the most frigid periods of the Cold War, this graphic adventure casts you as a secret agent trying to find a nuclear bomb planted by the Soviets somewhere in blockaded West Berlin. Their idea is to use it to hold the West hostage and take over the remainder of Berlin. I'm sure the scenario would be interesting if the game itself were more playable.

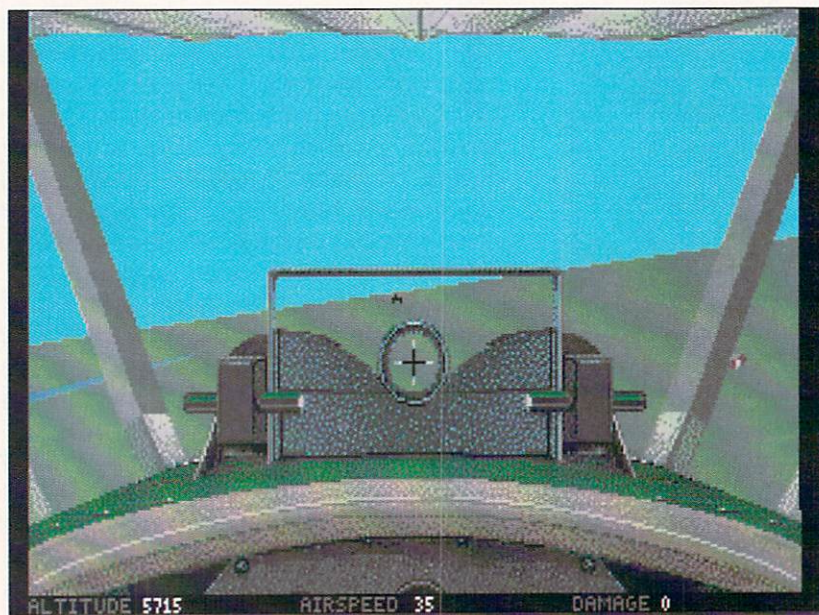
First, loading from floppies takes over four and a half minutes, and that's skipping the intro. The game uses a topdown view, which frequently makes it difficult to figure out what's what. At the outset, you're standing in front of Templehof Airport and you have to wait for a cab. I have waited as long as 20 minutes for one to show up. Not exactly what I'd call considerate to the player. The interface has considerable potential, using pop-up icons in the style of thought balloons in comics, and I think it could be well-used in other adventures.

Unfortunately, *Berlin 1948* holds interest only for historians specializing in the early Cold War era; it is too slow and too arbitrary to capture, let alone hold, a gamer's attention. - Tom Malcom



BERLIN 1948

Rainbow Arts / Electronic Zoo, 3431-A Benson Avenue
Baltimore, MD 21227, 301-646-5031



BLUE MAX

Three-Sixty Software / EA, 1820 Gateway Drive
San Mateo, CA 94404, 415-571-7171



I think it's time to impose at least a one-year moratorium on combat flight games from any era. *Blue Max*, as the name implies, is set in World War I and is the umpteenth of the genre we've seen. It's better than some, not as good as others, and mostly indistinguishable from the pack.

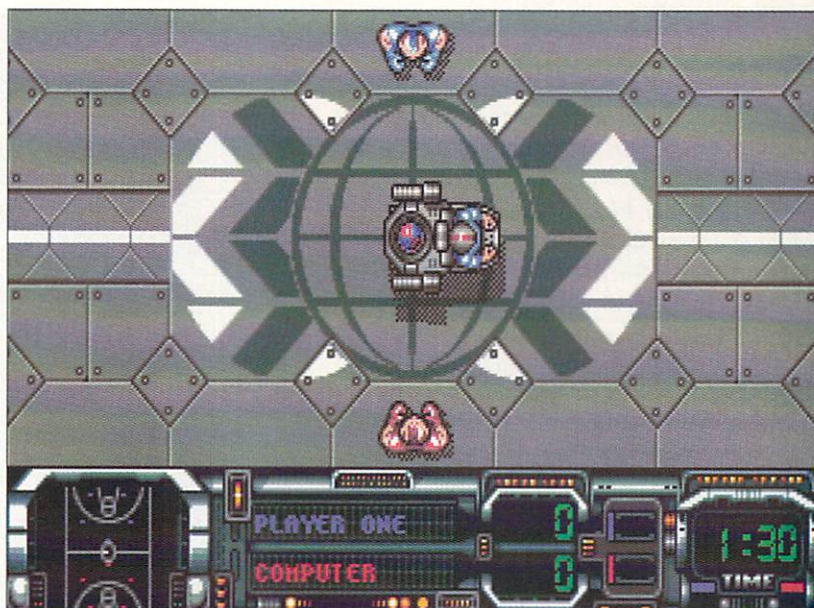
As a flight simulator, *Blue Max* is easy to fly and there are plenty of options for varying the game play, including a selection of eight different planes. It can even be played as a strategy game where you plot out detailed battle plans on a hex-grid and then play them back in the standard 3D vector view. The vector graphics are pretty much standard quality and you can set the level of detail. (Unfortunately, no matter how much detail I see in vector graphic games, it's never enough to suit me.) There is also a VRC function that will let you replay the missions you fly against the Red Baron and other WWI aces.

If you're shopping for a World War I flight simulator, *Blue Max* is certainly worth looking at. I just wish I hadn't seen so many of the type already. - Tom Malcom

Imagine basketball as conceived by a sports-mad psycho-killer and you have the basic premise of *Future Basketball*. The object of the game is the same as present-day basketball, but the rules have changed radically. Weapons and fouling are not only permitted, but encouraged, and grievous bodily harm is a requirement for winning. (Is this starting to sound like Wall Street traders from the Reagan era?)

The style of the game is typically British, with crisply drawn graphics, fine animation, and very good music and sound. The joystick control is quick and responsive. The game's view is top-down and it's played on a field larger than the screen, and the scrolling is automatic and fast enough that you won't even notice that the playfield is moving. There are options for setting up complete leagues of these bloodthirsty basketball teams.

Future Basketball is highly playable, if a little frantic until you figure out what you're supposed to be doing. Fans of body-contact sports will certainly get a kick (not to mention more serious wounds) out of it. - Tom Malcom



FUTURE BASKETBALL



Hewson, 56B Milton Park
Milton, Abingdon, Oxon, England OX14 4RX, 0235 832939



ZARATHRUSTA



Hewson, 56B Milton Park
Milton, Abingdon, Oxon, England OX14 4RX, 0235 832939

Zarathrusta is classic European arcade fare that will keep you hunched over your joystick for weeks on end. There is, of course, a typical gratuitous scenario about space rebels and Klyston pods, but forget about that and dive right into playing.

The graphics, music, and sound effects are top-notch. The backgrounds are animated and have that beautifully drawn, hard-edged European look. The only real problem with the game is that learning to control your space ship is going to take some practice. The game incorporates gravity into the play equation, and you have to provide thrust to keep from crashing into walls and other things. (Just to make things interesting, the gravity reverses on some levels.) Control requires a great deal of precision, so don't be discouraged if it takes a while to get the hang of it; your persistence will be amply rewarded. I'm not sure how many levels there are (the game is tough enough that I've only made it to the second), but there are code words so you don't have to start from scratch. *Zarathrusta* is a very fine addition to your arcade collection. - Tom Malcom

Gold of the Aztecs is one of those Eurogames that has fine graphics, a great soundtrack, and no playability.

There are two main problems and a couple of minor ones. My biggest gripes are the dead-slow animation and control that is too sluggish. You play an Indiana Jones-type character battling your way through the jungles of Central America looking for a lost Aztec temple filled with gold. The specific problem here is that in trying to control your character, you have to remember to stand still while you draw your gun, fire, and then put it away before you're allowed to move again. The game also has the worst code-wheel copy protection I've ever seen. The wheel is black on black, which is bad enough when it's new, but after it has a few fingerprints on it, it's nearly impossible to read. I also find it annoying that one of the first things you encounter is an elephant. Wait a minute! There aren't any elephants in Central America! I guess the designers didn't know that.

I suppose I might like it better if I practiced enough to get used to the lethargic controls, but I'd rather not.

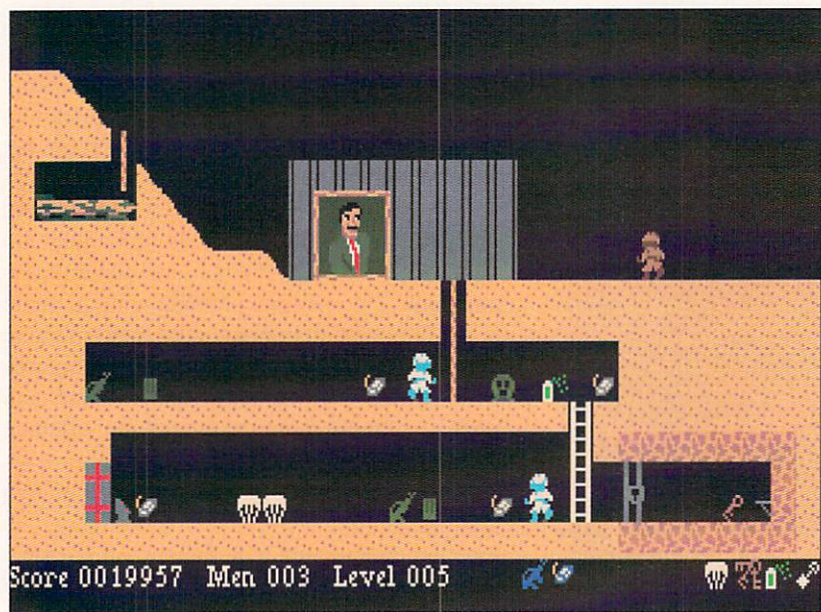
- Tom Malcom



GOLD OF THE AZTECS



U.S. Gold / Accolade, 550 South Winchester Blvd.
San Jose, CA 95128, 408-985-1700



THE SADDAM HUSSEIN GAME



Dwagon Computers & Software, 10695 Devils Head Mtn. Rd.
Littleton, CO 80127

Trying to make a profit from war is a tradition that dates back to about ten minutes after the first war started and someone on the sidelines sold the first broken club as a souvenir. Unfortunately, the tradition has persisted, and this piece of drek showed up a matter of days after the ground war with Iraq started. The highly unskilled programmers either couldn't get it rushed out the door any faster or they were just waiting for the ground war to start so they could include the date in the intro. (The intro is, by the way, the best part of the game, using digitized black & white images of the conflict.)

In any event, the resulting game is of the absolute lowest quality. The graphics are reminiscent of some of the poorer C64 character-graphic games from ten years ago. In fact, most public domain games are miles above this. The game itself is a simplistic, badly drawn shoot'em-up, that has you running through a series of screens battling the Iraqis and trying to capture Saddam himself.

If you're going to play a game, play anything but this one.

- Tom Malcom

HARPOON

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In the few short months since it hit the streets, Harpoon has become the number one, best selling wargame simulation in America. And no wonder.

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M. Evena-Brooks, Computer Gaming World

"Harpoon is the definitive simulation of modern warfare at sea".

Richard Sheffield, Game Players

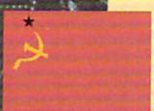
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SCENARIO EDITOR

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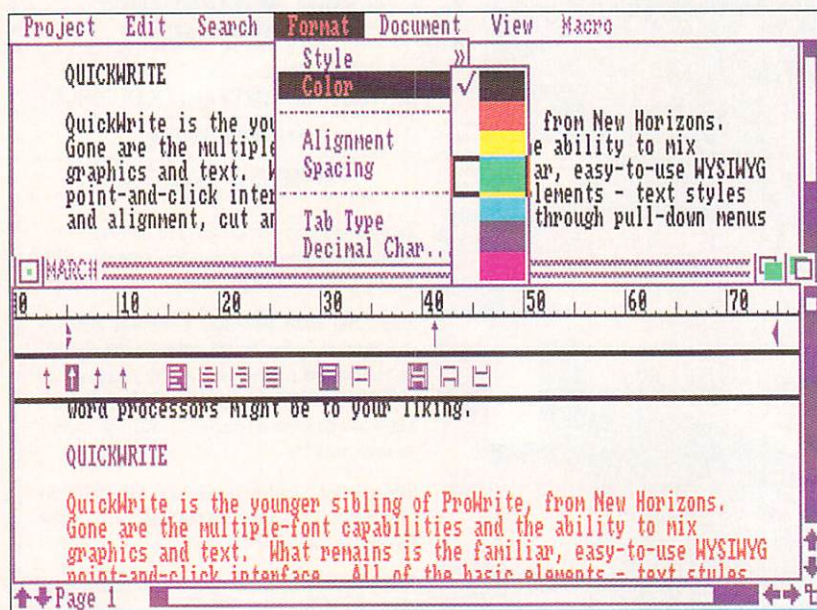
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Circle #102 on the Reader Service Card

Jim Meyer on Productivity



QuickWrite, an easy-to-use WYSIWYG color wordprocessor from New Horizons.

What are you really looking for in a wordprocessor? Are you planning to write a treatise on the finer points of Greco-Roman wrestling, complete with footnotes, index, table of contents, multiple columns, and a cross-reference? Maybe you're just going to dash off an occasional letter. If lean is the look you like, this month's duo of wordprocessors might be to your liking.

QUICKWRITE

QuickWrite is the younger sibling of ProWrite from New Horizons. Gone are the multiple-font capabilities and the ability to mix graphics and text. What remains is the familiar, easy-to-use WYSIWYG point-and-click interface. All of the basic elements - text styles and alignment, cut and paste - are accessible through pull-down menus and keyboard equivalents. In true WYSIWYG fashion, what you see on the screen is what you'll get from your printer.

There's nothing mystical about using QuickWrite. Boot it from CLI or icon and everything that you need is right in front of you, ready to use with little or no explanation. When you boot QuickWrite, you have the option of opening a document or starting with a blank

window. The default window comes with a ruler - set in 10 pica increments - and several layout gadgets. You may open new document windows as needed, and cut and paste between them. New windows are automatically titled (as "untitled") and numbered. The customary scroll gadgets, both sliders and arrows, occupy the right and bottom borders. Within the ruler are the line spacing, tab style, and paragraph spacing gadgets.

TAKE MY TAB, PLEASE

Tab Styles offer you four different flavors of tabs: Left, Center, Right, or Decimal. Left tabs are the familiar variety; they allow you to align vertical columns of text along the left side. Center tabs allow you to centrally align text, and right tabs allow you to align text along the right edge. Decimal tabs allow you to define any character as a decimal. That character will define the alignment point of successive lines of tabbed text.

ANY AREXX PORT IN A STORM

QuickWrite, like its parent ProWrite, includes an ARExx port. This allows you to create macros (external ARExx programs) which you can use to do the "grunt work" for you. QuickWrite's macro language commands allow you full access, through ARExx, to all of its functions. The examples given in the manual range from case conversion to math calculation, and give you a good starting point toward writing your own macros. The ARExx port is probably the single most powerful feature of QuickWrite; it allows you to create features which don't exist within the program.

NICETIES AND NASTIES

QuickWrite's Mail Merge feature is a handy thing to have around when you're sending out the obligatory "Thank you for the lovely gift" letters, or for creating instant junk mail. It's as simple as creating a template document and a data document. The data will be merged with the template document when you select the Print Merge option. Page numbering comes in five varieties, and you can specify any starting page number. I liked the "document info" feature, which gives an instant count of pages, sentences, readability, and more. On the frustrating side was the lack of explanation for the "Print front to back" option in the Print requester. I took this to mean that the margins would alternate for odd and even pages, but it had no discernible effect. I'd also like to see support for multiple columns and true jus-

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Pundit ponders
a pair of
powerful
wordprocessing
programs.

tification, but *QuickWrite* is not intended to be a high-end package.

TRANSWRITE

Like *QuickWrite*, *TransWrite* bills itself as a "high performance wordprocessor." Unlike *QuickWrite*, *TransWrite* is not a WYSIWYG wordprocessor. Text is formatted through formatting codes, and you'll have to use the Preview option to see what your text will look like when printed. The differences between *TransWrite* and *QuickWrite* reflect their different heritages and philosophies. *TransWrite* - a precursor to and superset of the Article Editor included with *Professional Page* - is geared more towards page production. This is evident in its features, like automatic hyphenation, indexing, alternating margin capability, and widow and orphan control.

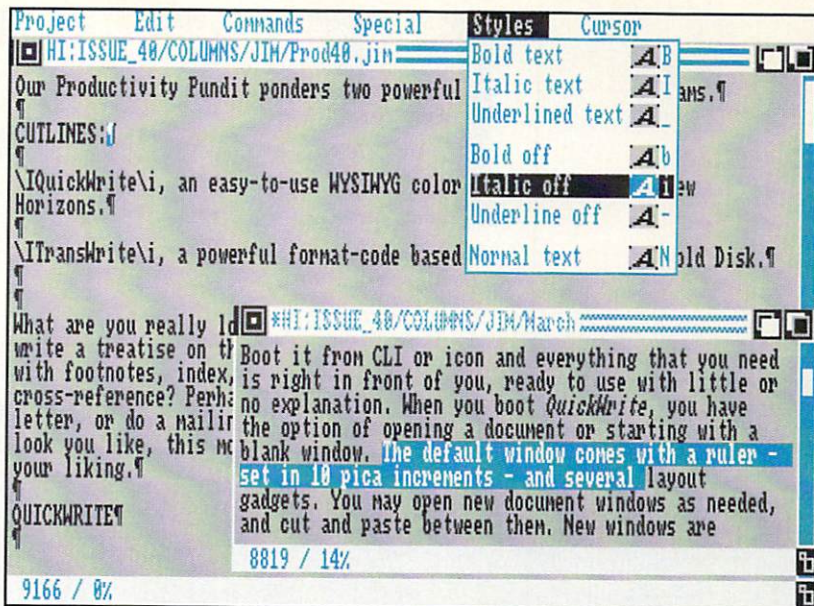
TransWrite presents a much more austere face to the user than does *QuickWrite*. The only gadget you'll see in a *TransWrite* window is the vertical scroll bar. Although it's got the same quick mouse-editing capability as *QuickWrite*, what you see ain't what you get. Formatted *TransWrite* documents are littered with code. If you're creating (or have loaded) a *Professional Page* document, you'll see *PPage* code. If you've used any of *TransWrite*'s formatting features, you'll see *TransWrite* code. (Thankfully, you can "hide" the *PPage* code if it gets to be distracting.)

SKINNY BUT FAT

TransWrite may be a skinny wordprocessor, but it has a lot of features. Like *QuickWrite*, *TransWrite* allows you to control the alignment and style of text, has provisions for headers and footers, does spell checking, and can do mail merge. *TransWrite* has other goodies, too. It has an indexing feature, automatic hyphenation, and allows you to set different margins for left and right-hand pages. It also has a relative margin setting, which allows you to specify a margin as an offset to the current margin setting. One of the more curious options is Encrypt Document, which allows you to "secure" a document by converting the text to seemingly random characters.

Interestingly, both *TransWrite* and *QuickWrite* have a formatting language in common - *Professional Page*. Both programs will read and write files with *PPage* format codes. They both also share the ability to open multiple windows, and cut, copy, and paste between windows. Both come with a document analyzer and spell checker. *TransWrite*, however, gives you the ability to spell check as you type.

Although *TransWrite* doesn't speak ARexx, it does allow you to record sequences of keystrokes - up to 99 - and save them as macros. It also has a "translation" feature which allows you to substitute abbreviations for sequences of characters. These sequences can range from much-used phrases (I substituted "TW" for "*TransWrite*", for example) to formatting codes. To use this feature, you create a translation table. This table will have entries like "TW"="TransWrite". The Translate command uses these entries to expand the abbreviations in your document.



TransWrite, a powerful format-code based wordprocessor from Gold Disk.

If you've ever suffered through the mystical experience known as a Guru, or if you've ever quit a program without saving your work, you'll appreciate the RecoverTW utility. This program will search through RAM, even after a reboot, and recover as much of your document as possible. *TransWrite* also has a text memory packing option which can help free up RAM in tight situations.

WIDOWS AND ORPHANS

TransWrite has a special provision for a condition known as widows and orphans. This happens when a paragraph is abruptly interrupted by a page break. When the first line of a paragraph appears by itself at the bottom of a page, it's called an orphan. The last line of a paragraph appearing alone at the top of a page is called a widow. *TransWrite* allows you to prevent this from happening through the widow and orphan control.

WINNERS... AND WINNERS

Both programs get the job done. *QuickWrite* is clearly the easier program to use, although the powerful ARexx port will require some programming skills for effective use. *TransWrite* doesn't have the immediacy of WYSIWYG formatting, but it has more features and more built-in power. Both programs are fast, and both programs perform without surprises. Before you choose between the two, think about the kind of writing you'll be doing, and how you want to interact with your wordprocessor. They are both star performers, but they have different areas of expertise.

ADDRESSES

New Horizons, 206 Wild Basin Road, #109,
Austin, TX 78746, 512-328-6650

Gold Disk, 5155 Spectrum Way, Unit 5, Mississauga,
ON, Canada L4W 5A1, 416-602-4000



QuickWrite

★★★★+

\$ 75.00

New Horizons

TransWrite

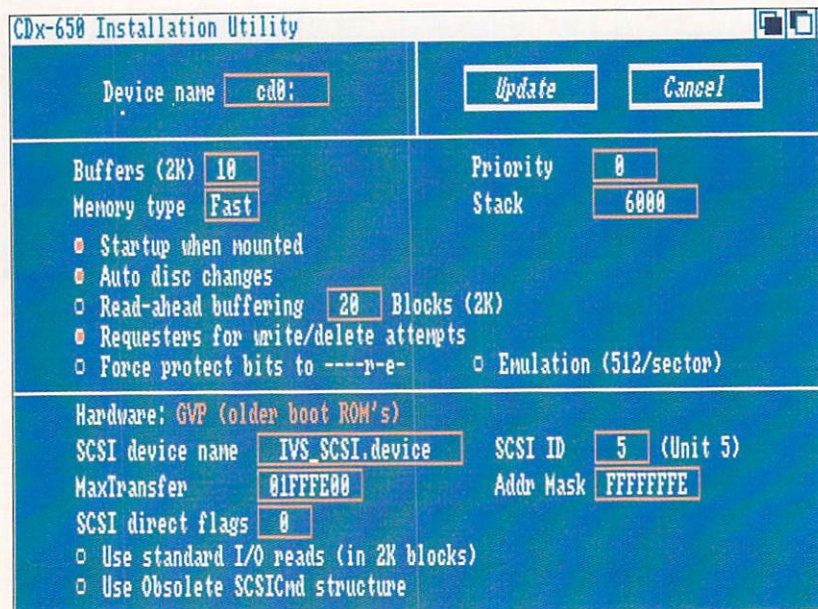
★★★★+

\$ 69.95

Gold Disk

H^{on} Hardware

Morton A. Kevelson



Xetec's nicely automatic installation screen.

Mort The K
takes a
screwdriver
to Xetec's
CDx-650
CD-ROM drive.

Although Xetec - which is pronounced 'zeetek' - may sound peculiar, their products are not. My earliest contact with Xetec was when I discovered their printer interfaces for the Commodore 64. Since that time, Xetec has successfully made the transition from the Commodore 8-bit world to the Amiga's 16/32-bit technology with a variety of SCSI hard drive interfaces and memory expansion boards. Xetec's latest offering is the first affordable read-only CD-ROM drive for the Amiga.

THE XETEC DRIVE

The Xetec CD-ROM system for the Amiga is able to read standard audio CDs (Sony/Phillips "Red Book") and digital CDs in the High Sierra and ISO-9660 (Sony/Phillips "Yellow Book" modes 1 & 2) formats. The system will not read the smaller single play audio CD format. The digital data capacity is 650 megabytes. The drive mechanism consists of a Chinon CDS-431 CD player. The CD platters are placed in an external caddy, which looks like an oversized floppy disk with a transparent hinged lid, before insertion into the player. One caddy is included with the drive.

The unit that I looked at was the model CDx-650E which comes with its own stand-alone enclosure. Power is obtained from an external wall-mounted

transformer. Connection to the Amiga is via a 25-pin SCSI cable to the external SCSI port on your Amiga's SCSI interface. This, of course, implies that your Amiga has been equipped with a suitable SCSI interface. Your SCSI interface must also support the SCSI direct command in order to work with the Xetec CD-ROM system. As of this writing, Xetec has successfully tested the CD-ROM system with their own line of SCSI interfaces as well as the interface in the Amiga 3000, Commodore 2090A and 2091, GVP with Fast ROMs, IVS *Trumpcard Professional* and the *SupraDrive 2000* with WordSync.

AUDIO OUTPUT

The CDx-650 system is also able to play standard audio compact disks. Control of audio CD playback is via an on-screen compact disk player which looks just like the corresponding audio component. The CD player program displays elapsed and remaining time for each selection as well as the time for the entire disk. Shuffle play and random repeat is also supported. The CD player can also be used to start a straight-through play of a compact disk, after which the program can be shut down. The CD-ROM system will continue to play the rest of the disk on its own without any further intervention from the system.

I have also been able to start up and play an audio CD, using the *Trumpcard* and a *Xetec FastCard Plus*, and then power off the Amiga while leaving the CDx-650E powered up. Of course, there is no way to control the playback of the CD once the computer is turned off. The software remote control program, which is used to control the playback of audio CDs, can also be shut down and restarted in mid-play without affecting the continuity of the program. Hard drive access speed also appears to be affected; however, I have not performed any tests to determine the extent of the interference.

The front panels of both versions of the CDx-650 have a miniature headphone jack and a volume control which adjust the headphone level for listening to audio CDs. The only other features on the front panel are an eject button and an open slot which accepts the CD carrier. The back panel of the CDx-650 E has a pair of 25-pin SCSI connectors and another miniature audio jack which supplies line level stereo audio output for connection to an external amplifier. The internally mounted version of the system has the same front panel arrangement; however, the line level audio output is sent to a pair of unterminated shielded cables. You have to provide the appropriate audio connectors and mount-

ing hardware. A standard 50-pin SCSI connector is used to connect the *CDx-650I* to your SCSI interface.

SETUP

As shipped from the factory, the *CDx-650* has been set up as SCSI device number 5. A set of miniature switches on the back of the Chinon drive mechanism can be used to change this to any SCSI device number from 0 to 7. The back panel of the *CDx-650E* has to be removed to access these switches.

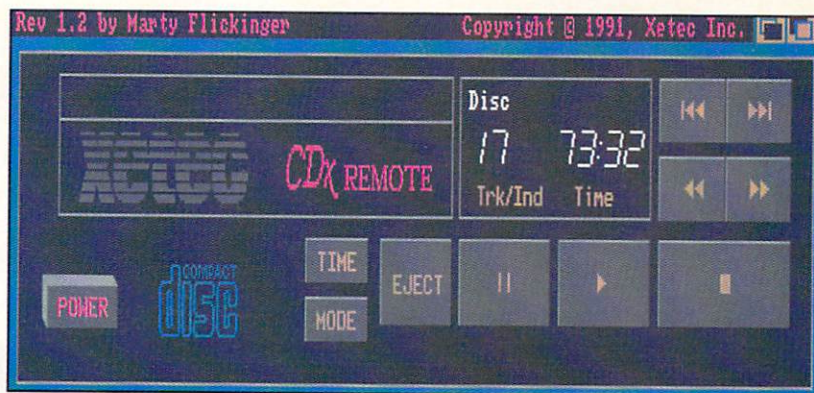
Installation of the *CDx-650*'s driving software is virtually automated for the SCSI interfaces which are directly supported. Simply start up the supplied mouse-driven installation program, select your SCSI interface from the pull-down menu, and let the program complete the installation. One of the options you may wish to consider is the way the CD driver reacts to write attempts to the CD-ROM. Although it is not physically possible to write to the CD-ROM, AmigaDOS can be fooled into thinking that a write has taken place. This setup option lets you run software that normally writes to its boot disk directly from the CD-ROM.

SOFTWARE

The real question is this: once you have bought this \$699 marvel, what can you do with it? After all, you cannot store data, as it is a read-only device. Xetec does supply their *Fish & More Volume 1* disk which contains the complete contents of Fred Fish disks 1 through 375 along with a collection of additional public domain programs. Altogether, the disk contains about 421,995,352 bytes of data in 51,882 files and 682 directories. (Both *Quarterback* and *Byte'n'Back* needed over 30 minutes just to read the disk's directory into RAM!) The programs and data on the *Fish & More* disk have been organized by topic in directories which go as deep as eight levels. This means that if you are looking for a particular program which has been popularly indexed by the Fred Fish disk number, you will have to hunt for it. On the other hand, the topical organization of this collection does make it easy to find what you want without resorting to any indexing system.

Unfortunately, as of this writing the *Fish & More* collection is the only Amiga-specific data disk on the market. Xetec is working on another Fish disk which will contain the next 100 disks in the collection, and which they plan to sell separately for about \$50. Xetec is also working on a driver which will permit the Amiga to read the encyclopedia CD-ROMs published by World Library. They have also been actively soliciting Amiga developers to consider publishing their software on CD-ROM. As of this writing, Oxxi and Tiger Media have expressed an interest.

The *CDx-650* will read any CD-ROM that follows the ISO 9660 or High-Sierra format. This covers nearly all of the disks that are available for MS/DOS computers as well as many Macintosh disks. Of course, the Amiga will not be able run any of the driver programs that are on these disks; however, text files will be readable. In particular, clip art collections, which are in EPS format, should be usable by Amiga page layout programs such as *Professional Page 2.0*, *PageStream*,



The on-screen CD player provides all the standard CD controls.

and *Saxon Publisher*. Images from bitmap graphic collections may also be converted by software such as ASDG's *Art Department*. Some experimentation will be required to find out just what can be used.

If you have a BridgeBoard installed in your system, then you can also obtain a SCSI adapter with cable from Xetec. This \$50 adapter will let you hook up the *CDx-650* to the MS/DOS side of your system. You will have to swap the cables every time you wanted to switch between the two parts of your system. This arrangement would not be practical with the internally mounted version of the *CDx-650*. Of course most BridgeBoard users will have already filled the Amiga's internal drive bay with the BridgeBoard's own 5 1/4 inch floppy drive. Xetec is also working on *CDx-650* compatibility with *AT Once*, the plug-in card on a chip which adds an AT computer to any Amiga.

Xetec has tried some preliminary CDTV software with encouraging results. They were able to load and run some programs. Keep in mind that the CDTV is designed to access video as well as audio and digital data. CDTV's video output is integrated into the system, while *CDx-650* does not have video capability.

THE BOTTOM LINE

Is the Xetec *CDx-650* worthwhile? Consider that a stand-alone audio CD player sells for about \$100 at this time. The 450 megabytes of public domain software on the *Fish & More* CD-ROM would fill about 600 floppy disks. If this library were purchased from a public domain vendor, you would expect to pay about \$2 per disk, or at least \$1200! If you were to copy the disks yourself, it would only cost you about \$300 if you buy bulk packaged floppy disks, plus an obscene quantity of time to do the copying and labeling. You would still have the problem of borrowing the collection for copying. When done, just think of the volume that is needed to store 600 floppy disks. If you are paranoid, you might want to make a backup copy of the entire collection. By comparison, CD-ROMs are practically indestructible, and they are not affected by magnetic fields. If you have a need for a CD player and the entire Fish collection, then, even if we ignore the convenience of the system the *CDx-650*'s 'real cost' is somewhere between \$299 and negative \$501.

Xetec's

CD-ROMs

☆☆☆☆+

CDx-650E

\$699.95

CDx-650I

\$599.95

Xetec

2804 Arnold

Road, Salona,

KS 67401

913-827-0685



AMIGA UNIX: A Hands-On Look

At presstime, we received an Amiga 3000UX UNIX computer from Commodore. While it's impossible to review a high-end UNIX system in a single page, we thought we'd take a little space in this issue to pass along our first impressions.

OUT OF THE BOX

There is not much special about the A3000UX hardware. It is basically an Amiga 3000 with a nameplate that says "Commodore Amiga 3000UX" and UNIX pre-installed on a 100-meg hard drive. You might notice that the mouse has three buttons rather than two, and the back panel sports an extra connector coming out of an expansion slot; this is the Ethernet network connector card.

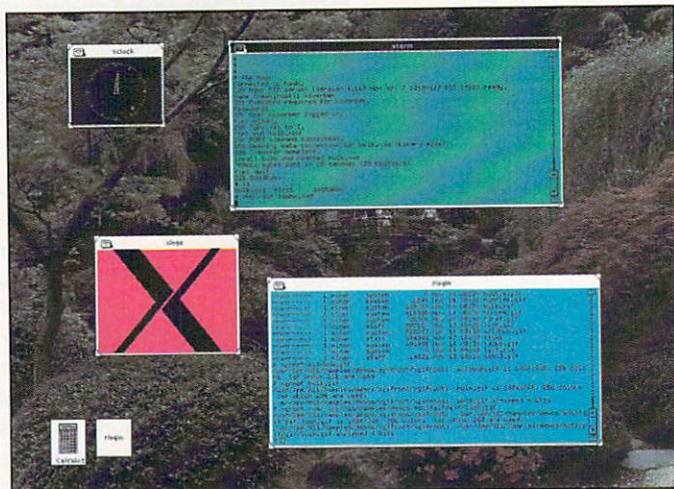
SWITCH ON

Powering up drops you right into UNIX. You've got to know what you're doing right away, since UNIX runs a configuration script the first time you power up. If you screw things up (such as inadvertently setting the 'root' password to some gibberish) you might find yourself in a circumstance where you have to restore the UNIX operating system from the included backup tape. Problem is, you don't have a tape backup drive unless you order one separately, so you might also find yourself stuck. Take my advice: read the manuals on the topic of startup configuration before you turn on the switch.

If you just want to check out the hardware, you can power up in AmigaDOS mode by simply holding down the left and right mouse buttons. You get the standard A3000 boot menu. You've got four and a half megs of RAM, one chip and 3.5 fast. (Half a meg holds the Kickstart image.) Besides your two megabyte boot partition, there's a five meg WORK: partition of hard drive space left for DOS applications. The rest of the 100-meg drive is reserved for UNIX.

GETTING STARTED WITH UNIX

If you boot to UNIX, you'll find yourself on a monochrome text screen that reports five



Color XWindows, not yet available but 'coming soon' for the A3000UX with A2410 8-bit color card.

megs of total RAM, with not quite 2.5 megabytes free. Now it's time to hit the manuals.

Though the box contains a standard A3000 manual, it won't do you much good at this point. Go instead for the three spiral-bound UNIX manuals. The skinny "Installing Amiga UNIX" book will step you through the startup procedure. Then it's on to the slightly thicker "Learning Amiga UNIX" for UNIX basics like working with directories and using the 'vi' editor. "Using Amiga UNIX" is the biggest volume, and it documents the basics of the Amiga UNIX system. Altogether, you get about a 1.5 inch-thick stack of manuals, not much when you consider that UNIX docs usually take up a six-foot shelf. The online manual pages are a lot of help, though, and a photocopied sheet tells you that you can order up to 28 other manuals from Prentice-Hall at a total cost of about \$840. These cover a wide range of UNIX topics, from simple System Administrator's and User's guides to Programmer's reference manuals.

POWER AND POTENTIAL

The best reason to consider Amiga UNIX is conveyed by the catchword 'Open Systems'. UNIX is the standard for the future, and that's the reason you'll be seeing more UNIX systems in business, science, and education. Applications written in 'C' can be ported from one UNIX platform to another with very little modification.

APPLICATIONS

Commodore says that many vendors are working on Amiga ports of their UNIX software, and 40 to 50 programs should be available soon. Among them are *TeX*, the premiere text-formatting programming language; a plethora of *Clig*-applications, including *Clig-Office*; *EMacs*; the *Exclaim* spreadsheet; *Waterloo Maple V* (which will also be available in an AmigaDOS version); the *P-Stat* statistical package; and a variety of C, Fortran, BASIC, COBOL, C++, and other language compilers. Also coming soon is the University of Lowell hi-res 8-bit color graphics board, which will make high-speed color XWindows a reality.

One quick note on XWindows: the version included with Amiga UNIX System V Release 4 (v1.1) is monochrome and slow as molasses. A later, faster version is promised down the road with v2.0 of UNIX, and color XWindows on the A2410 University of Lowell graphics card should be faster, too.

THE BOTTOM LINE

From what we've seen, the A3000UX should prove to be a very competitive and cost-effective UNIX system, especially once the ULowell board transforms it into a (relatively) inexpensive color graphics UNIX/XWindows workstation. We expect to see lots of these units in professional environments where the Amiga would never even have been considered before.

HYPERBOOK:

Hyper Made Easy

HyperBook is the first hypermedia product that has really hooked me. It's very easy to learn and to use, and it's one of those all-too-rare programs that can be used productively on many levels. You can have a simple slideshow going in a matter of minutes, or you can spend a few weeks and design your own Amiga control system. If you can dream something up, there's probably a way to do it with HyperBook.

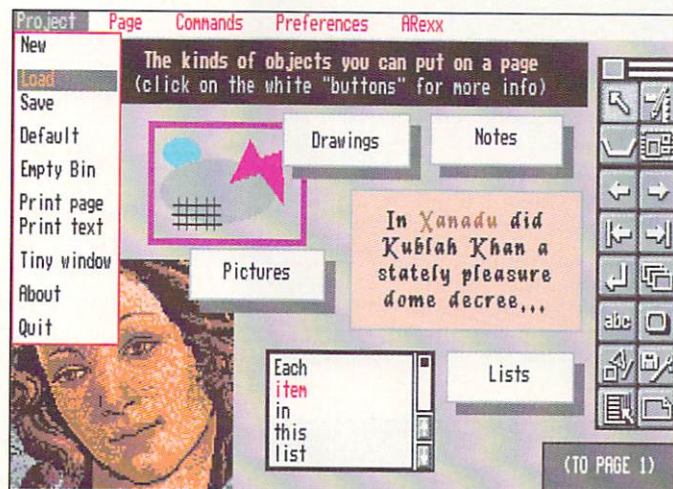
WHAT IT IS

The primary functions of HyperBook are pretty much the same as other multimedia packages; you design interactive screens with buttons that can be clicked to perform different operations, like displaying a graphic or reading a text file. HyperBook starts out with a blank screen and an iconifiable tool strip with gadgets for creating pages, objects (which can be either graphics or text), and lists. The strip also provides tools for manipulating, editing, navigating, and generally mucking around with your creations. The text entry and formatting tools are fast and easy, which is to be expected from the same authors who gave us TransWrite, and the drawing tools are a real surprise. They don't simply create bitmap graphics; they produce structured drawings that can be moved and sized just like text boxes!

WHAT IT REALLY IS

HyperBook is, obviously, designed around a book-with-pages metaphor, but don't be fooled by mere appearances. The real heart of HyperBook is ARexx, and that's what makes it so powerful. Everyone talks about ARexx and nearly all software these days includes ARexx support. The problem is that ARexx doesn't have a front end; it doesn't have a screen or icons or buttons to push, so most people don't use it. I think HyperBook has the power to change all that. It not only provides a workable interface to ARexx, it makes ARexx easy to use and, above all, accessible.

HyperBook includes a built-in ARexx program editor and an absolute wealth of new



This HyperBook screen shows the tool menu and a selection of objects.

commands to integrate HyperBook functions with standard ARexx. One of the examples included with HB is an ARexx reference that I've been referring to constantly. If you've been meaning to learn ARexx, this one example is worth HyperBook's \$99.95 price-tag.

IMPERFECTIONS

HyperBook is powerful, but it isn't perfect. There are some shortcomings that I'd like to see fixed in future revisions. I'd like the option of 32-color pages, even at the sacrifice of hi-res. I'd also like to have better palette control - you can change the colors, but you can't do the usual copy, exchange, or spread. And, while HB will display static images, it won't directly play animations, nor does it directly support sound, thus making it very difficult to sync a soundtrack to your presentation. (You can, of course, incorporate an AmigaDOS or ARexx command to play the animation or sound.)

I see HyperBook as a much more personal product than AmigaVision and other presentation-oriented software. While it certainly has the power to produce some impressive presentations, it is more ideally suited to sketching out ideas, making freeform notes, and cobbling together the little applications we all find ourselves needing now and then. It is fast enough and intuitive enough that once you get the hang of using it (and that is an extraordinarily easy process), you'll find

yourself using it all the time, for everything from grocery lists to full-blown software applications.

STAYING POWER

If you've been thinking about diving into the hypermedia pool, you won't find a better springboard than HyperBook. It is so well-designed, convenient to use, and downright functional that it will probably take its place right alongside your favorite wordprocessor and drawing program (which, in fact, can be run from a menu within HyperBook). And if you come up with some killer application that you just have to share, there are two freely distributable standalone players so you can. Besides the difference in size, one player supports ARexx while the other doesn't.

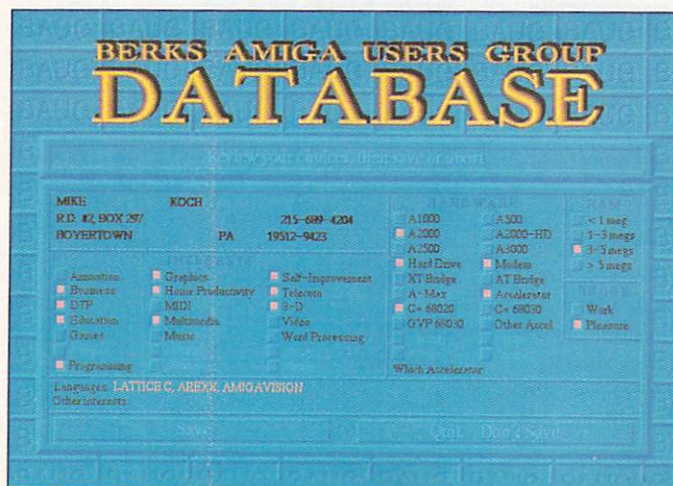
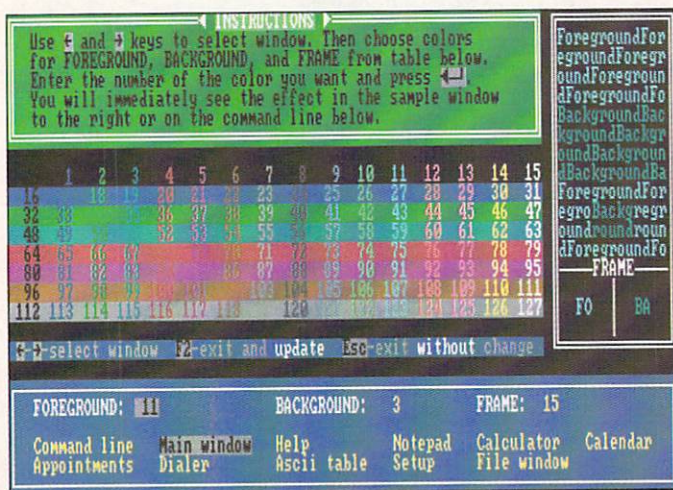
One of the things I've discovered about software over the years is that there are two basic types: software I use, and software I dabble with. In the space of a week, HyperBook has become software I use. I can't think of a higher compliment.

HyperBook
\$ 99.95

★★★★★

Gold Disk
5155 Spectrum Way, Unit 5,
Mississauga, ON, Canada
L4W 5A1, 416-602-4000

PUBLIC DOMAIN



AMERICAN PEOPLE/LINK

The Amiga Zone and Amiga Zone PRO are American People/Link's Amiga support areas. Each file is listed with its library file number and is tagged either "AZ" or "AZPRO" to indicate in which Zone you'll find it. For information on getting your own People/Link account, call 1-800-524-0100 (voice) or 1-800-826-8855 (modem).

IBEM.LZH [27146/AZ]

Throw away Commodore's *Transformer* software. *IBeM*, by Mark Tomlinson, of Christchurch, New Zealand, is a slightly crippled but working demo of his shareware product. It's an IBM PC/XT emulator which runs MS/DOS software in monochrome Hercules or CGA color mode. There is no parallel or serial port support or sound yet, but this tiny program is three or four times faster than *Transformer*. *IBeM* needs a 68020 or '030 Amiga and also requires an MS/DOS system disk plus the "messydos.device" (found online as *MSH.LZH*). *IBeM* even multitasks on its own screen! This demo version only supports one floppy disk or two megs of hard disk space and quits after 15 minutes. Still, it's incredible. (The screenshot shows Borland's *SideKick*'s color setup screen running under *IBeM*).

DCTV PICTURES

If you're a new owner of Digital Creations great DCTV box, log on and SCAN our library for a KEYword of **DCTV** - we have dozens of DCTV-format pictures online including pinups, ray-traces, and digitized scenes from many sources. You'll be amazed at the quality of these pictures and also learn what kind of results you can expect from feeding different types of output to DCTV's software. (Shown: "Apple".)

UGDB.LZH [3099/AZPRO]

Here's a user group membership database by Mike Koch of Berks Amiga Group, written in (and requiring) *AmigaVision*. The program provides name, address, phone, personal hardware, and personal interests fields which can be entered, edited, searched and printed. The *AmigaVision* "flow" is not edit-protected so you can customize it for your own group or needs. The screens are very pretty (see screenshot), although being high-res they make the program run on the slow side.

GOLDENFLEECE.DMS [26920/AZ]

HOLYGRAIL.DMS [26921/AZ]

With the demise of Infocom and their time-honored all-text adventure games, Jim MacBrayne of Glasgow, Scotland, set out to fill the void by writing his own, emulating the feel and style of Infocom's best authors. Here are two of his best, now recompiled for American NTSC screens: *The Golden Fleece* and *The Holy Grail*. Rated "advanced", these absorbing adventures are rich and deep; MacBrayne has done a good job with his language parser, making gameplay a rewarding experience. Support this talented shareware author with your bucks and we may see more of these in the future.

- Harv Laser [CBM*HARV]

PUBLIC DOMAIN

GENie

GENie is General Electric's commercial online information service. GENie's *Starship Amiga* software library has over 10,000 files available for downloading. For information on signing up for GENie, call 800-638-9636.

MODMMMASTER.LZH [10527]

Euro-demos and *SoundTracker* music files are entertaining enough, and the best efforts really show off the Amiga's sound capacity, but they're not quite "real" Amiga software, because they typically take over the machine and hold it hostage. Not any more. Night Vision's *Module Master* (shown) is a snazzy little multitasking *SoundTracker* module player with many goodies: CD player-type controls, PAL (for speed compensation) and sound filter switches, sleep mode (to clear the screen some as it plays) and a "scopes" mode which tracks the waveforms passing through each of the Amiga's four voices. Besides *SoundTracker* files (15 and 31 instrument flavors), *MM* handles *NoiseTracker* and *Future Composer* modules. You'll also need the *PowerPacker.library* [POWERPACKER_LIB341.LZH 10653] in your LIBS: directory for *Module Master* to work. And you'll need some music to play. My own favorites are *Chicago Song* and *Little China* [CHICAGO.LZH 9283]; *Rainy Night* [RAINY_NT.LZH 9284]; and *Up Front Part 3* [UPFRONT.LZH 9430]. Others will enjoy *Cycledelic* [CY-CLEDELIC.LZH 10473] for its heavy metal punk guitar samplings or *Space Egg* [RHYTHM.LZH 9910] for its manic drum routines.

AMIGADUNGEON.LZH [10631]

Zork and other text adventure fans may want to check out *Amiga Dungeon*. *Dungeon* is an old MIT-bred mainframe text adventure game ported by Loren J. Rittle from Fortran on an old DEC computer to C and AmigaDOS. Earlier interpretations of *Dungeon* for smaller computer systems yielded Infocom's popular commercial adventures *Zork I*, *II* and *III*. But the original DEC code and the Amiga port are still freely distributable.

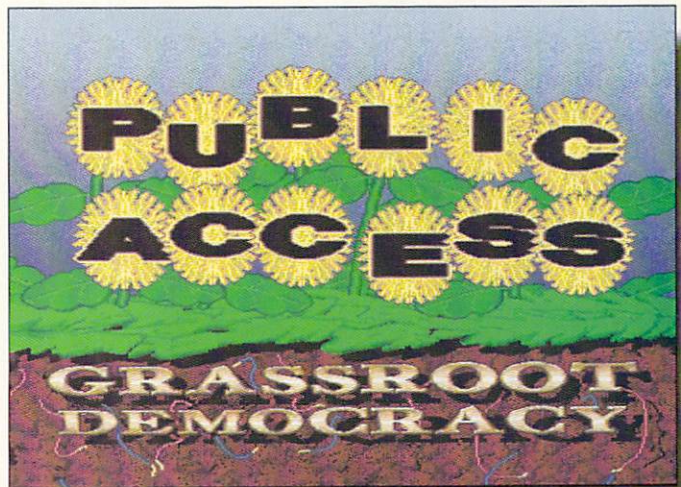
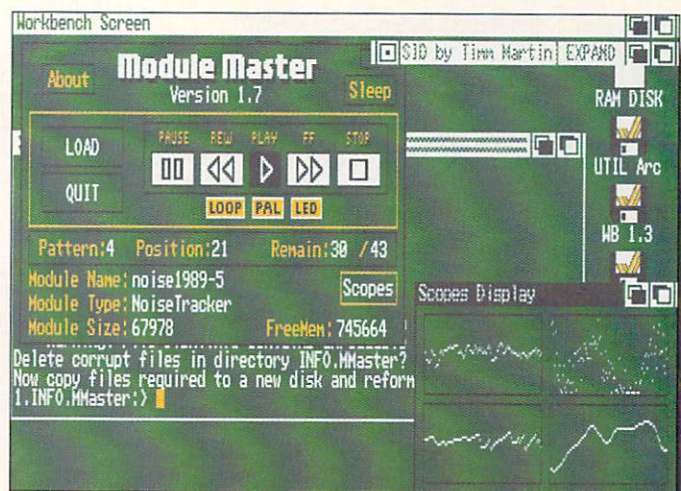
AMYSHISTORY.LZH [10488]

In *The Story Of Amy The Squirrel* (shown), maestro animator Eric Schwartz presents a *Deluxe Video*-produced musical slideshow to tell the fanciful tale of his pet cartoon character, Amy, and her work in cartoon history. Showcasing Eric's drawing talents, each frame humorously emulates the drawing style of various studios and eras from early Disney to recent Japanese animation.

DANDELIONS.LZH [10658]

Donald J. Myers' *Dandelions* (shown) shows what is possible with a touch of talent and a little program called *Deluxe Paint III*. Using an animated brush alphabet of his design, this 45-frame animated title sequence will be of particular interest to public access cable systems.

- Don Romero



PUBLIC DOMAIN



DISK COLLECTIONS

PREMIER SOFTWARE

I trust we don't have to re-introduce Premier Software to you; they were the subject of my first column for *.info*. Easily identifiable by their colorful labels, Premier disks are organized by category and easy to use, because wherever possible, programs are designed to operate from the Workbench. Where this isn't possible, complete instructions tell you how to get started.

ELECTRIC WORD

This three disk set contains the Bible program (shown) examined by Don Romero in *.info* #36, but now includes both the New Testament and the Old Testament. If you are not into downloading over 1.8 megs of compressed data, buying this set is a good option. In addition to the complete Bible, you get *Fullview* (a great text reader), *Textra* (an editor) and *PPTYPE*, a reader/printer which also decrunches *PowerPacker* text files. *PowerPacker* is a nice alternative to spreading the Bible over eight disks if you don't have a hard drive. With this combination of tools, you can decrunch, read, edit and print any part of the Bible you desire. Quite an achievement on three disks! *Electric Word* is a smooth package, and the utilities are a bonus.

CT SCAN 2

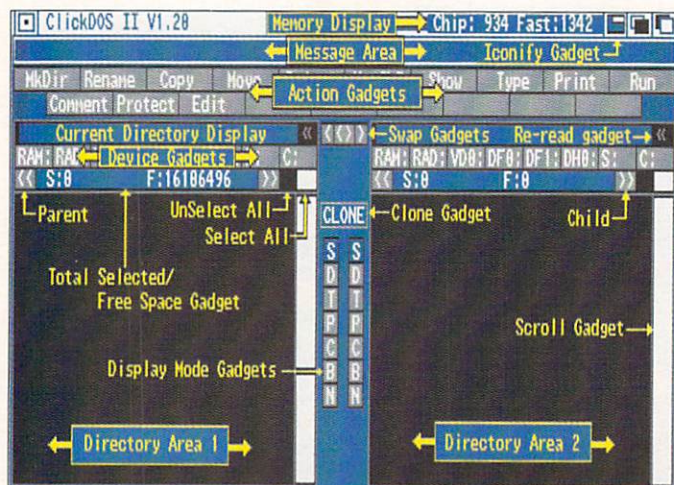
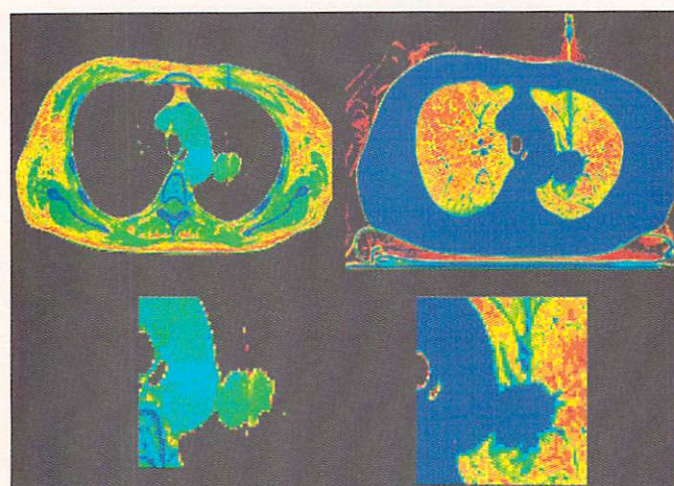
Okay, you frustrated "wannabe" doctors, here's an unusual package. This is a viewer for CAT images, the kind they produce with the million dollar scanners that are used for non-invasive diagnostic techniques. Included with the slightly difficult-to-use program are several black and white scans. They are not IFF files, and are displayed with a high-res interlaced bottom screen and a standard CLI window above. (The false colors shown here are not part of the original images, but I think they make the details more visible.) A zoom mode allows you to magnify part of an image for a closer look. More images are available from the program's author, in case you don't have a CAT scanner of your own.

DIRECTORY UTILITIES

I know, you don't need another directory utility. But you should look at *ClickDOS II* (shown), which is a very slick shareware package from Gary Yates, and well worth the \$15 he's asking. I like the gadget which calls up a new CLI from within the program, and the ability to batch select IFF or text files for display. In about five seconds (adjustable) the first marked file will be loaded and displayed, followed by all the others. The timing can be overridden with a keystroke if you see something you like. Also part of this deal is a spooler for printing out those endless docs. Speaking of docs, those with *ClickDOS II* are a model of clarity, better than many commercial ones I've seen. You also get *SID* and *Logg*, the other "best" directory utilities, all on one disk. Buy this immediately!

HOW TO ORDER

Single disks are \$6.00. Five or more, \$5.00 each. Fred Fish Disks, \$2.00 each. Premier catalog disk, \$3.00 (including shipping). Shipping, any size order, \$3.00. Premier Software, P.O. Box 3782, Redwood City, CA 94064, (415) 593-1207 - Jeff Lowenthal



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GAMES

- ☐ #021-BATTLEFORCE: Take control of a two-hundred-foot robot armed with lasers and missiles as you blast and maneuver your way thru this non-stop action strategy game. Game is over 600k and takes up the one disk.
- ☐ #023-GAME HINTS: This is an extended Dungeon Master game hint disk with more maps and hints. Spells, item locations, riddle answers, more. Beast II walk-thru from start to finish. Also included are the Ultimate Hint lists 1 & 2 with hundreds of cheats and back doors for all your favorite games. No adventurer should be without this one.
- ☐ #024-ARCADE 1: Three great arcade-type games. TRICLOPS—use your tank or your three-legged imperial walker in this 3-D world of high tech wars. GRAVITYWARS—precise calculations of angles and velocities are needed in this space war game. WANDERER—collect all the diamonds you can but watch out for land mines!
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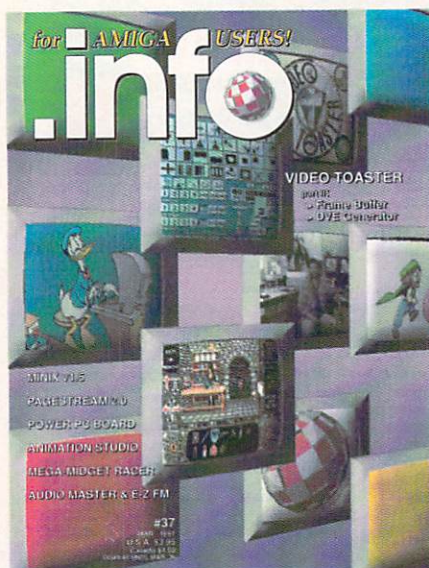
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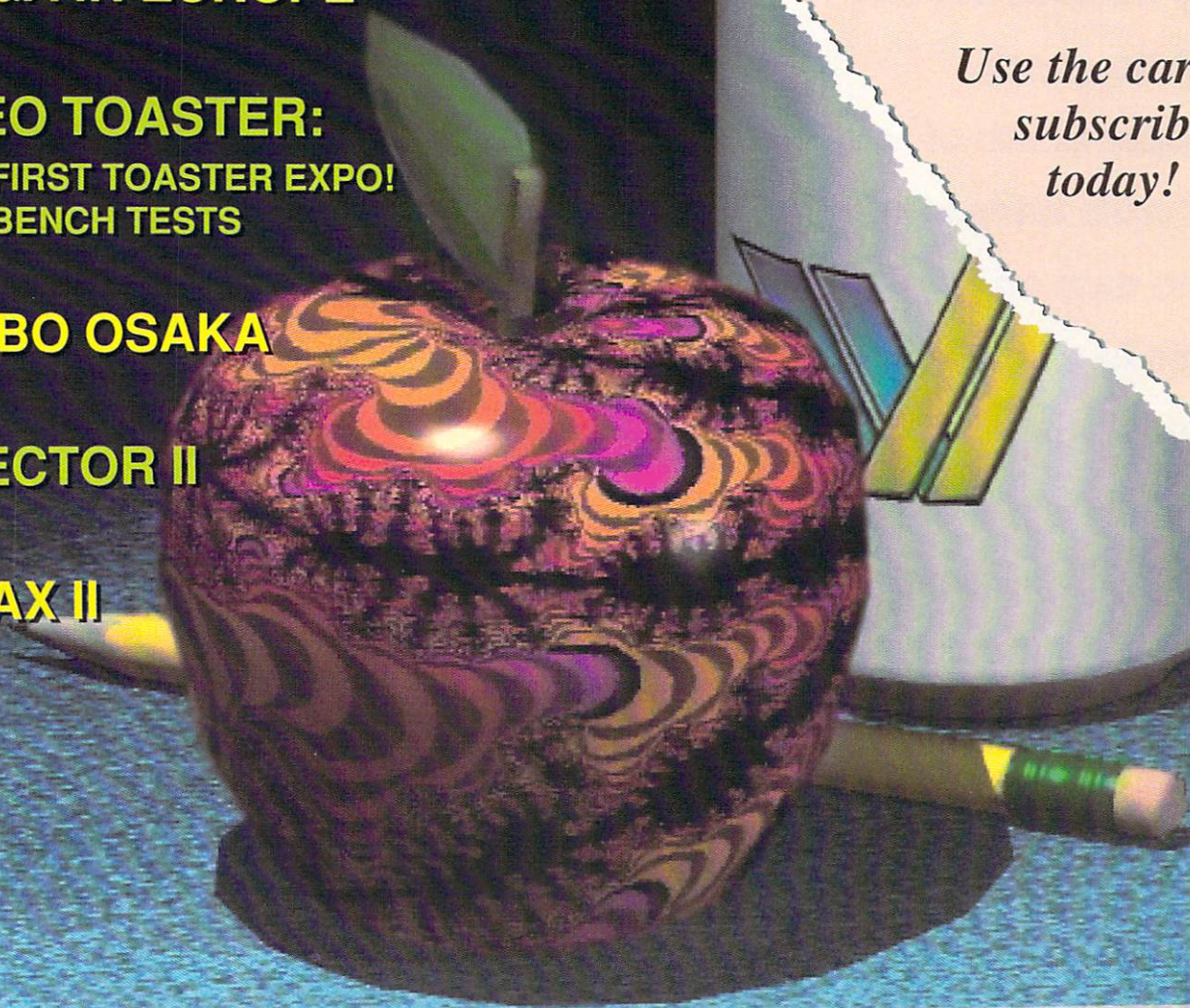
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IN SEARCH OF ICONS: AN EXPLORATION

Make your icons look right under Workbench 2.0

by Jim Butterfield

In this issue: Amiga guru Jim Butterfield delves into the mysteries of icons in 2.0, and finds out why his face doesn't look so good; Skipper Smith of Motorola brings us up to date on RAM chips in all their confusing incarnations; and *.its* editor Chris Zamara teaches us how to write a program in... AmigaDOS?!?

This is a tale of discovery. I want to take you along as I retrace a little exploration I did recently into several areas of the Amiga's workings, particularly the makeup of '.info' files, bitplanes, and colors. You may enjoy some of the technical elements that are found along the way.

I should caution you, however, that the answer I was seeking was staring me in the face - so to speak. Those of you who like to "skip to the back of the book" to see how things turn out are invited to do so. (Perhaps you should read the problem first, though). Others are invited to follow along on the technical trip.

The Problem

In making the transition from Workbench 1.3 to 2.0, I noticed that some Workbench icons - the more 'artistic' ones - lost their good looks. In particular, my vanity was wounded: a disk icon showing my classic features, drawn some time ago by Betty Clay, was transformed into a 2.0 mudpack nightmare. A peek at Figure 3A will illustrate the problem.

Workbench 1.3 comes with a number of tools to help you fix up the appearance of icons you don't like. In the Tools drawer, you'll find IconEd, which will allow you to draw or touch up an icon. The same drawer contains IconMerge, which will split apart or merge two images into a single icon. In theory, you could use IconEd to change the icon's pixels as desired.

But IconEd isn't a practical way to do the job. In working with only four colors (more precisely, three colors and a background), I soon got lost trying to remember which pixel was what color. Even if I could keep track of them, the work of chopping each pixel, one at a time, would

be horrendous. Sounds like a job for a computer.

By the way, you could use Preferences to change the working colors of the screen. But that's a temporary fix, not a solution. If you have DOS 2.0, you want your computer screen to look like DOS 2.0 and your icons to blend in.

First Diggings

The icon pictures are stored in a file whose name ends with the characters '.info'. The right type of file will also contain the value E310 hexadecimal in the first two bytes. That identifies a 'Workbench object' file, and that's where we must look for our pictures.

Chapter 30 of the *ROM Kernel Manual - Libraries & Devices* gives some information on this kind of file. Regrettably, it's not a holistic view of the file's structure; instead, it gives 'snapshots' of various pieces of this file.

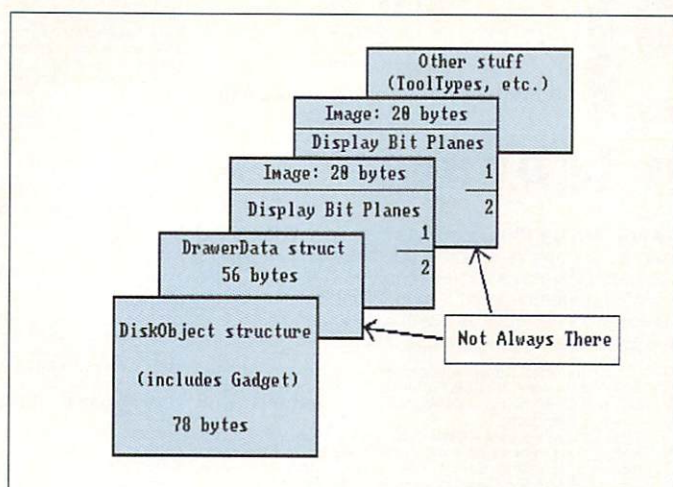
Here's why: the file is not a unified structure. Instead, it's a collection of bits and pieces, one behind the other. Figure 1 will give you the idea: the file contains various chunks, some of which may or may not be there.

I was first tempted to try using a call to the Icon library, *GetDiskObject*. This would bring in the file so that I could play with the pixel colors; then, I would use *PutDiskObject* to store the revision. That would be a valid approach. But I looked elsewhere, since it seemed 'messy'.

Here's the difficulty: function *GetDiskObject* takes the various parts of the file and scatters them around in memory. The file doesn't stay in one piece after it's loaded. That's still workable: you can follow pointers to find the bit you want.

For my purposes, that seemed unnecessarily complex. All I really wanted to do was to

Figure 1.
A "DiskObject"
.info file contains
a collection of
structures; not all
of them are
always there.



chop up a few pixels within the file. It seemed to me that I might better treat the file as a unit, reading it in myself, doing the work, and putting it back.

File Fiddling

Reading a file is no problem. Finding the part of the file containing the display bitplanes takes a little thought. It's mostly a question of finding the variable bits. Is there a drawer structure or not? How big is the display bitplane, anyway? Is there a second image or not?

The existence of a DrawerData structure within the file may be deduced in either of two ways. If the 'Disk Object Type' is Disk, Drawer, or Garbage, a drawer will be present. Or: within the DiskObject structure there is a pointer to the DrawerData structure. The address held by this pointer won't be valid during the time the file is on disk, of course; but if it's non-zero, there's a drawer involved.

To find out if there's a second image, we must check the Flags field in the Gadget structure that's part of the DiskObject. If you find a highlight mode of GADGHIMAGE (value 2), you have two images; otherwise you have only one.

Finally, the size of the display bitplane. In the Image structure, we find values for the width, height, and depth of the image. Width: pixels are packed one per bit. In theory, we may divide by 8, rounding up, to get the number of bytes to a graphic line. In practice, we must divide by 16, rounding up, to get the number of words per line. Multiply that by the number of lines ('height'), and you'll get the number of words in a display bitplane. Double the value to get the

byte count.

We may assume that 'depth' will have a value of 2 for conventional 1.3 icons; that means that the image will have two bitplanes, each of the size we have just calculated. The bitplanes are neatly stacked one behind the other.

Now we have found the location of the two bitplanes, we're ready to play with the pixels. If we have two images, we'll do the job twice, of course.

Pixel Plunking

If you have looked at the innards of IFF files, you may have found pixels stored in a 'compressed' mode. That's not the case here: the pixels are stored in their final screen-driving form. We can go to work on them directly.

We must now face up to the main question. We have found the two display bitplanes; what do we want to do with them?

First, let's look at how the two bitplanes work together to produce selected colors. Figure 2 illustrates the mechanism.

Each bit of a display bitplane matches a specific point (pixel) of the screen. If you have two bitplanes, the two bits of a specific position, one from each display bitplane, work together to specify a color for the screen pixel.

Suppose both bits are zero: we write them so as to make the binary number 00, zero, and color zero is selected for that spot. Color zero is the background ("see-through") color. Or the bits might come together so as to make: binary 01, color 1; binary 10, color 2; or binary 11, color 3. In this last case, both corresponding bits are on.

Our objective is to change the colors. Somehow, we must meddle with the two bitplanes so that each color may be replaced by another. Let's look at the colors on the two systems:

Color:	0	1	2	3
WB 1.3:	(Blue) White	Black	Orange	
DOS 2.0:	(Grey) Black	White	Steel	

As a first step, I decided that color 0 should stay as color 0. In fact, color zero is transparent; where it occurs, you 'see through' to whatever is behind the icon. The blue and grey colors mentioned above are the normal screen background colors for 1.3 or 2.0 systems.

So my task, as I perceived it, was to find a swap arrangement for colors 1, 2, and 3 that would make the icons look acceptable. Almost any combination can be achieved by moving the bits and perhaps using the EOR (exclusive OR) logical function. I did a lot of experimenting and finally arrived at the conclusion that should have been obvious in

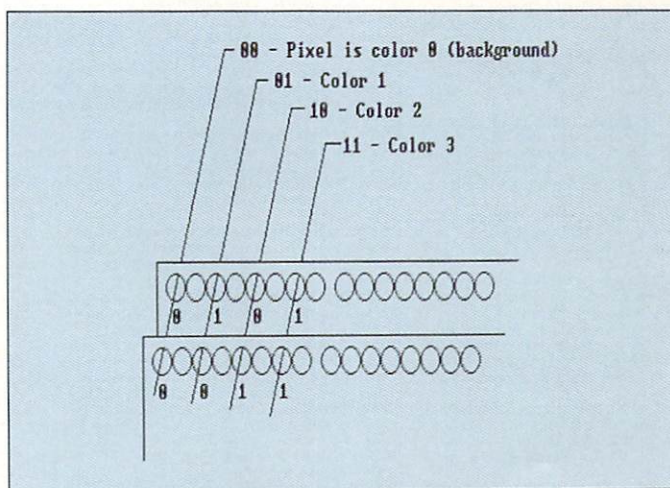


Figure 2.
Two display bit
planes work
together to
produce one of
four colors for
each pixel. Colors
are numbered 0
to 3 (binary 00 to
11); color 0 is
"background" or
transparent.



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New Disks

FD55:Puzzles - Contains TripleYatz, a multiplayer, multigame yatzee clone. Also BoomSquad, an .info best of PD Pick (#39, pg 45), Adventure, Logic, and Mosaic; four very good strategy games.

FD56: Arcade - Includes SpaceWar, an .info "Best of PD" pick (#39, pg 45), HueyRaid a well done helicopter arcade game, and Game - a "GameBoy" emulator with a version of Tetris.

WB87: New Testament - Contains the entire text of the New Testament in a well thought out user interface. 1mb suggested.

WB88abc: The Complete Bible - A three disk set, with the entire text of the New Testament and Torah (Old Testament) includes WB87. 1mb suggested.

WB89:Education - Fish, not your everyday electric eel, but a fun to experiment with simulated fish aquarium. Also contains a well done math quizzer, history, religion, geography and more.

WB90: Rippers, Strippers and Beats - For the Amiga music enthusiast, this disk contains many programs designed strip music from your favorite games and programs. Music can be played with your favorite PD Music program. Also contains Drums, a very nice drum machine. This disk does require moderate knowledge of the CLI.

WB91:AV Educational - Flags of Europe, beautifully presents all of the flags of Europe along with maps and geographic statistics of the countries. Requires AV.

Other Great Disks!

FD5: Tactical Games - BullRun - a Civil war battle game, Metro - you play the role of a city planner. Build wisely and your system will be a success, but poor planning will lead to disaster and financial ruin. Very very habit forming.

FD6: GAMES! - This disk is chock full of games including; Checkers, Clue, Gold - A new slide the pieces puzzle, Jeopard - An enhanced version of Risk, RushHour - Surprisingly addicting, and SpaceWar - Best described as a cross between Combat Tanks and asteroids.

FD7: PACMAN - This disk contains several pacman type games including; PacMan87, MazMan and Zonix.

FD9: Moria - This has great graphic controls, multiple spells, similar to Larn and Hack. Play time several weeks!

FD10: HackLite - A dungeon adventure game. Considered a must-have classic. This is the second release of this game on the Amiga. Great Amiga graphic interface. Play time several weeks!

FD11: Las Vegas and Card Games - Las Vegas Craps - The best Las Vegas Craps simulation every written for any computer. Contains extensive HELP features. Also Thirty-One, VideoPoker and more.

FD12A,FD12B: Star Trek, The Game - This is by far the best Star Trek game ever written for any computer. It features mouse control, good graphics, digitized sound effects and great gameplay. Counts as 2 disks. Req. 1Mb and two drives (or hd).

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FD14: Dungeon Master Hints and Arcade Games - DM maps, spells, item location, and hints and more, also on this disk, Hball - an arkanoid/breakout type game, Trix - a Qix type clone.

FD17: Educational Games - This disk includes several games for the younger members including geography, math, science, and word games, also includes Wheel of Fortune.

FD20: Tactical Games - MechForce(3.72). A game that simulates combat between two or more giant, robot-like machines. Simple words can't begin to give you the feel of piloting a 30 - 40 foot tall, fire breathing, earth shaking colossus that obeys your every whim.

FD26:Arcade Games - Marble slide, this is a truly commercial quality game. Similar to a Lucas game named PipeDreams, excellent playability and entertainment. Mutants - a small version of the arcade game of the same name, also SuperBreakout a pong/arkanoids type game.

FD27: Arcade Games - This disk is loaded with some great

games. Includes, Raceorama a great racing car game with ten different courses, MiniBlast a helicopter gunship type clone, Shark in the same class as frogger, and SBreakout the original breakout with more.

FD29: Shoot'em up's - WWII - you're the pilot of a WWII plane flying through enemy territory, you've just been spotted, good luck on you mission, SpKiller - try and penetrate enemy lines with this game, and Retaliator - another great game.

FD31: Games! - Air Traffic Control - a good ATC simulation game, Black Jack Lab - a full featured set of card games, ChessTel - play chess with your friend in distant and remote places with this game and a modem, labyrinth - a well done text adventure game (like an infocom game), and MouseTrap - a 3d maze game.

FD32:Flight Simulator - Includes an instrument flight simulator for a DC10.

FD33: Arcade Games - Freddy a mario brothers type of game, Gerbils a target practice game, PipeLine a German interpretation of Pipe Dreams, Tron a light cycles version, and wetroids a wonderful version of asteroids with a hilarious twist.

FD34: Games - Includes WellTrix a derivative of the addictive game of tetris, and new version of BackGammon. Also included are several new "Schwabie type Hacks".

FD35 Omega (v 1.3) - A new outstanding dungeon and outdoors adventure game in a similar vein as hack, rouge, and moria. This version is considerably faster and better than all previous versions. Play time several weeks or months.

FD37a & b:Tactical Games - Empire (2.2w) This great game comes highly recommended. With a full-featured graphic front end.

FD38:Games - Cribbage Master - A great cribbage game and tutor. Spades - a well done card game, ChineseCheckers - A computer version of this classic, Puzz - a slide piece puzzle game and construction set.

FD39a & b:Tobias Star Trek - This is a new, completely different version of Star Trek than that found on FD12. This one was created by the German author Tobias. Now with English instructions. Very Excellent!!! Counts as two disks. Requires 512k memory, a 500, 2000 or Pal.

FD40:Arcade - MiddleEast - a timely arcade game of death and destruction set in Iraq. BackToTheFutureII - a very playable demo version of this soon to be released commercial game. City - a missile command clone.

FD41:Games - Includes Capital Gains - a stock market game, Ball a Arkanoids type of clone with many great twists, and Desert Shield - a search and destroy conquer theme.

FD42:Games - Includes SpaceWar3 - a remake of this original Amiga classic, Trippin - a fascinating board game of intrigue, strategy, and player manipulation. Dominion - an engrossing strategy game of galactic war and conquest. Frog - a frogger type clone, and Mines - a very good strategy board game.

FD44: Game - Mechflight is an out of this world role-playing adventure comparable to hack and moria. The setting, interplanetary colonies and space stations. In your quest to explore the world, take time out to liberate bad guys of their most valuable possessions, engage in a mortal combat or two against robots and alien life forms, pick up a new amiga 9000. Most of all, don't forget to stay alive...

FD45: Arcade - Three good shoot'em ups. Batman - save the city from the Joker, DriveWar - gangsters are moving in on your territory, stop them at all costs. Web - a spidery, buggy affair of eat or be eaten.

FD47: Arcade Games - Contains DownHill - a demanding computer slalom ski game, MicroPac - a Workbench mini-pacman game, CrackOut - a break out clone, Jet - a superb aerial dogfight game, AmegaRace - an interesting asteroids type of game, and WindyDay - a unique arcade shoot'em up.

FD49:Chaos Cheats - This disk contains an everything you wanted to know about cheat set for Chaos Strikes Back, including full maps, spells, object locations, super characters and more.

FD50: Submarine Game - Sealance, one and a half years in the making, this is an outstanding submarine tactical game. Commercial quality, highly recommended.

FD51: Games - DesertStorm a fast action arcade game, Amigatraion a well done concentration game, Chute a parachute jumping game, Running a dungeon adventure game similar to Wanderer, and Solix a solitary card game.

FD52: Classics Games - PetersQuest a well done Mario brothers type of game, Jymbo a two player missile command clone, and Vstank a tank commander game.

FD53: Great Arcade - On this disk is a wonderful implementation of the ever popular classic arcade game Defender. Also contain Air Race a WWII flying ace arcade

game, and Psycoblast new creation idea game. **FD54: FoodFight** - Contains Galactic FoodFight, a wacky spaced out arcade game loaded with shooting Ketchup, and hamburger eating monsters, and flying pizzas.

WB2: General Interest - contains, Galaxy a program that represents the collision of two galaxies, Larn - an adventure/action game similar in concept to rogue or hack, but with a much different feel. Try it, you'll like it!, StarChart - a program that lets you display and identify about 600 stars, galaxies and nebulae visible in the Northern hemisphere.

WB4:Telecommunication - This disk contains several excellent pd communication programs designed to get you on line quickly and easily, Access (1.42) - A very nice ANSI term program based on Comm v1.34, but with the addition of transfer protocols, Comm (1.34) - Last version of one of the best public domain communications programs ever made on the Amiga, Handshake (2.12a) Handshake is a Full featured VT52/100/102/220

WB5 - Fonts #1 - Several fonts (35) for the Amiga, also included are five PageStream fonts, and ShowFont - a font display program.

WB6: Video Fonts #2 - ShowFont(4.0) This program allows you to quickly and painlessly view all 256 characters in a typical font. Large AmigaDos system fonts (many up to 56pts).

WB7: Clip Art - This disk is loaded with black and white clip art. Art includes, trees, watches, tools, US and State maps, and more.

WB9:Icons - Truly a multitude of various types and kinds. Also includes IconMister, IconLab, and others great utilities to help generate icons.

WB10:Virus Killers - The latest and best VirusX(4.0), Kv(2.1), and ZeroVirus(1.3).

WB11: Business - Clerk(4.0), finally a full featured business accounting PD program for the small to medium company. Includes receivables, payables, end of month and much much more.

WB12: Disk Utilities - This great disk is loaded with wonderful utilities for everything including making disk labels, disk cataloging, disk optimizing, disk and file recovery archive and organizing, and all sorts of file manipulation. A real must have!

WB13: Printer Drivers and Generator - over 70 different drivers, and if these don't do it, with PrtDrvGen you can make your own.

WB14: Video - on this disk are several utilities for the video enthusiast. We have included multiple slates, video titling, Bars and Tone, Gray Scale, Screen fades and swipes, Interface toggles, and SMPTE Calculators. Also on this disk is a full featured video cataloging program.

WB15: Business - This disk contains a spreadsheet, a database, a project/time management program and financial analysis (stocks).

WB16: Business - This disk contains an inventory manager, a loan analysis program, a great calendar/scheduler, a rolodex program, and pennywise a good "Cash Book" accounting for home or office.

WB18: Word/Text Processors - This disk contains the best editors. Includes, TextPlus (v2.2e) a full featured word processor, Dme(v1.35) a great programmers editor with strong macro features, TextED(v2.8) an enhanced Emacs type editor, and a spell checker.

WB20: General Interest - DiskSalv V1.42 a disk recovery program for all Amiga file systems, FixDisk V1.0 another file recovery program with features DiskSalv doesn't have, 3DLook gives a 3D appearance to your Workbench, Clean V1.01 a program to de-fragment memory, Tracer - trace any part of an image.

WB22: Fonts #3 - Several more great fonts. These, like the other font disks work great with Dpaint and WYSIWYG word processors.

WB23: Graphics and Plotting - Plot (20b) a three dimensional mathematical function plotter. Can plot any user defined function, BezSurf2 - produce awesome pictures of objects one could turn on a lathe. Can also map if image files onto any surface that it can draw. Now compatible with most 3D packages, and VScreen - makes a virtual screen anywhere, great for DTP.

WB24:Animation and Paint - On this disk, DA a complete commercial quality cell orientated animation package. Movie an "ANIM" player for standard animation. QuickFlx an IFF slide show and cell animation program. Also on this disk are two PD paint programs of good quality.

WB25:Educational - On this disk are two programs that can generate maps of differing types. World Data Base uses the CIA's data base to generate detailed maps of any entered user global coordinates. Also Paradox a great demonstration of Albert Einstein General Theory of Relativity.

WB26: Disk Utilities #2 - MrBackup, KwickBackup - two well done utilities to help with harddisk and floppy disk backups. FileMast - a binary file editor, LabelPrinter - Disk label printer with very powerful features.

WB27: Nagel - 26 Patrick Nagel pictures of beautiful women.

WB29: Graphics and Sound - This disk has several different Mandelbrot type programs for generating stunning graphics. Includes, MandelMountains - a realistic terrain generator, Fracgen - generated recursive fractals from user input, Mandelbrot and Tmandel - two fast mandelbrot generators, also Mostra - the best IFF display program to date, will display ALL IFF's including Dynamic HAM, and Sound - a great IFF sound player, will play anything. Try this disk, you'll love it!

WB33:Circuit Board Design - several terrific routines for the electronic enthusiast, Including PCBtool - a circuit board design tool, LogicLab - circuit logic tester, and Mcad (1.26) a well done new release of this PD CAD program, now comes with predrawn common circuit components for insertion into schematics.

WB34: Utilities - Several well done utilities, some will require moderate knowledge of a CLI or Shell for setup, Chatter Box - this one will play any user defined sound after any event (ie. disk insert, mouse click, disk removal...), Artm - The Amiga real time monitor, gives you full control of the Amiga OS, very powerful program, Helper - help program to make learning the CLI easier, and more!

WB35: 3d Graphics - This disk contains several neat programs to use with your 3d modeling/raytracing programs 3dFont - Full vector font set for use with 3d programs, FontMaker - make 3d fonts from any system font, Make3DShape - create 3d shapes from any image, DumpToIFF - create 3d animations preserves pallet, and World3d - a demo program of a front end for use with DKBRender.

WB36: Graphics - On this disk are several programs to create stunning graphical images including, MPath - creates swirling galaxy images, Roses - produce an unlimited number of variations of images that a symmetrically similar to a rose, SimGen - display those spectacular images as part of your workbench screen, and RayShade - a very good raytracing program, create your own beautiful 3d graphics.

WB37: Educational - Educational games and puzzles that cover math, geography, spelling, and books. Ages 6 - 15

WB38: Plotting and Graphics - Plotxy is the most powerful full featured plotting package. Used by many colleges and universities. A welcome addition to our library! Highly recommended. Plans - a incredibly well done Computer Aided Drafting program, very full featured. Tessellator - a program that helps generates fantastic looking, recursive M.C. Escher type pictures.

WB39: Music - Intuitracker is a German offering of an exquisitely well done program that allows you to play music on your Amiga with CD like controls. Lets you strip out music from your favorite games or others and include them in your music library.

WB40: Music - "CD on a disk", 90 minutes of modern music on this well presented collection.

WB41: Music - MED an incredibly well done, full featured music editor. Create your own stunning music directly on your Amiga. Similar to SoundTracker but better. Very powerful easy to use program.

WB43: Business - This disk contains AnalytiCalc - probably the most powerful spreadsheet program on the Amiga. A full featured spreadsheet with many features expected in a commercial package. Requires 1.2 MB of memory!

WB46: Clip Art - HighRes clip art with the following motifs - embellishments (borders, dodads), people, and

WB63: Disk Utilities #3 - Several highly recommended programs to aid in removing duplicate files from your hard drive, performing file backups, Binary editing, fast formatting, file recovery, disk track recovery, and forced DISK VALIDATION of corrupt disks.

WB66: Icons #2 - Lot's of neat icons. Also, several wonderful programs that let you create your own icons, modify and manipulate icons and info structures.

WB68: Music Utilities - several good utilities for the Amiga music enthusiast. Includes, Noisetracker - a great music creation program, Sonix2MOD - converts sonix to .mod files which then can be used by noisetracker, soundtraker, and MED. SpeakerSim - a speaker design tool demo, Wondersound is an additive harmonic instrument design tool with a separate envelope design window and 16 relative harmonic strength and phase angle controls.

WB69: Music - This disk has over 90 minutes of classical and modern electronic music for you Amiga.

WB70: Desk Top Pub - Atcp - transfer Macintosh screen fonts, Mac or IBM format AFM metric files, to Amiga screen fonts and PPage - metric files. With this program open door to the libraries of Adobe and PostScript type!, Calendar - month templates in PS form, Post - a full featured post script file display and print utility.

WB71: C64 Emulation - The A64 Package is a complete, very powerful, Commodore 64 emulator.

WB75: Music - over 100 instruments files (.inst) and sample sound files (.ss) for your music programs.

WB76: Applications - This disk contains Sticher - a often requested knitting design program, Lotto - a rather complete lottery tracking and prediction utility, SSS - this screen capture program can grab almost any screen including games, Today - a personal calendar, Tarot - fortune teller, and Grammar - grammar checker.

WB78: AV - On this disk are two Amiga Vision programs (bubler, sync) written by Lou Wallace, chief technical editor of Amiga World. These programs are marvelous examples of how too's with AV.

WB79: Home & Business Accounting - Includes Ckback - the most complete checkbook accounting program going, LCDCalc - this well done calculator has a very large display and operates from the keyboard or mouse, Mileage master - monitor your automobile mileage with this mileage log, Grammar - a grammar checker, and Worldtime - find out what time it is in up to 50 global cities.

WB80: Graphics - Raytracing programs generate absolutely stunning realistic looking planes, rockets, buildings... and surreal images often consisting of highly polished spheres and objects. 3-D Master is the most powerful EASY-TO-USE of it's kind we have seen to date. This is easily better, and more full featured, than similar commercial programs costing in the hundreds of dollars.

WB81: Great Applications - DataEasy a very easy to use, database program. Don't let the ease of use fool you, this is a very full featured database program including full printer control for address labels and mail merge applications. Also includes, TypeTut a good typing tutor, RLC a full featured label printer, Banner, a multi-font banner maker, and Budget a home accounting in a program. Highly recommended.

WB82: Animations - Four full length, well done "movie" style animations. Including, Coyote, JugglerII, GhostPool, and Mechanix. Two disk set, counts as one!

WB83: Computer Art - this disk has some of the best Amiga generated computer art that we have collected in the past 5 years.

WB85: Graphics - Contains several programs for manipulating 24 Bit color images (ham-e) and a rather nice Iff Image processing package.

WB86: Amiga Vision - Contains the Centurion Press, An Amiga newspaper by Lou Wallace.

DD45: AREXX PROGRAMS - This disk contains several useful arexx programs and examples, PopCL14 - The latest of a must have utility.

DD47: Pascal - This disk contains everything needed to program in Pascal. Includes, A68k (1.2) 68000 assembler, Blink linking software and PCQ (1.0) a modest Pascal sub-set compiler.

DD49: C Compiler - contains zc(1.01) fully K&R, zcc(1.0) front end, A68k (1.2) assembler, Blink linker.

DD50: AREXX #2 - a must have set of tutorials on AREXX and several useful examples and utilities for AREXX development.

DD51: Circuit Analysis - Aspic (2.3) A full featured program for electric circuit analysis.

DD52: Scientific - Includes Elements - an incredibly well

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done periodic table program with source, Scientific plotting - over 600k of Lattice C source routines that can be included in your own programs.

DD54: Compression - This disk is loaded with ALL of the best file compression programs and aids for the Amiga. Many of the programs can be used by the new user. Includes Arc(2.3), Lharc(1.0), Lhwp(1.03), Pkax(1.0), PowerPacker(2.3a) a must have by all, Zip(1.0), Warp(2.04), and Zoo(2.0). Also IFFCrunch an excellent compression for IFF files.

DD55: ARP - On this disk you will find the complete ArpRel3.0 release including the full user docs, the full Developers guide, ARP is the official AmigaDOS Resource Project (ARP) release 1.3. ARP makes many improvements to AmigaDOS and makes your system easier to use from the CLI.

DD57: Advanced Utilities - Msh - like Cross-dos, copies files to and from MS-DOS, Pal-NTSC - convert any pal program to NTSC and vice versa. Also several utilities that improve your startup-sequence, plus 25 more programs.

DD62: Basic and Xscheme - Cursor - a full featured Amiga Basic compiler, basic and text - several wonderful routines to help in basic programmers, and Xscheme - an interpreted object oriented language.

DD64 Amiga Programmers Manual - The fully comprehensive Amiga programming manual with source code examples and easy to understand tutorials!

DD65 C Tutorials - Several well done tutorials on how to program the Amiga. Includes tutorials and working examples on Device drivers, IFF reads and writes, Sound implementation, Arcade game design and implementation, Double Buffering, and others. A must have for Amiga Programmers.

DD66 Programming ToolBox - Many programs to help in your development efforts (most for C some for basic) Includes programs to generate requesters, an incredible spasmaker toolbox, to greatly aid compiling, convert DPaint brushes to C structures, a great library manager, and many more wonderful time savers!

DD69: Advanced Utilities - SerNet and ParNet - Connect two Amiga's and share resources, MemMonitor - Similar to WFRag but greatly improved, Selector - put menus on your workbench screen, and more.

DD71: C compiler - This disk contains Dice, Matthew Dillon's full featured, powerful C compiler and environment system.

DD72: VT Emulators - Contains three powerful, full featured vt emulators, with many advanced features including kermi, xmodem and tektronix protocols. VaxTerm, VLT, and more.

DD77: Fortran - Contains a full featured FORTRAN77 environmental development system. Also contains EzAsm a strongly macro dependent 68000 assembler.

DD78: Menus & System Enhancements - Several neat programs to aid in launching programs from special icons (Next computer style), adding WorkBench menus and more. Also contains many useful programs to determine operation system configuration, memory usage, load and many other important utilizations.



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transportation.

WB48: Clip Art - HighRes clip art with the following motifs - Holidays, music, medical, and misc.

WB49abc: Animation Sampler - On this three disk sampler set (counts as two disks) are some of the best animations that have been created over the last three years. Several examples of "Movie" type animations some with spectacular raytraced reality (coobyroby, watch, spigot and egg). Also several european style or "Demo" animation with incredible graphics and outstanding electronic music (akrlight, copersine, doc, dps2010, impact, and logodemo). These truly show off the creative edge of an Amiga!

WB50: Animation - Seven of the best european style animations or "Demos", including - scientific 451, subway (a U.S. entrant, also our favorite), sunride, thrstdemo, night, waves, and wooo.

WB51: Animation - On this disk are two excellent movie style animations including ShipRotation - a futuristic space ship orbiting a surrealistic world (one of the best), and RV-3 - a daintill anim of a rather wacked out airplane.

WB53: Graphics - The disk contains C-light - The easiest to use raytracing we have seen to date. This one started out life as a full featured commercial product similar to Sculpt3d. Raytracing programs can generate stunning, realistically shaded objects. Also, sMovie - a full featured video text titler similar to ProVideo, Broadcast Titrer. Great video scrolling, wipes, special effects, and more...

WB54: Printing - This disk contains several routines to help with the chore of printing. Includes Gothic - Finally a Banner printer for the PD! PrintStudio - a well implemented all-purpose printer-utility with a very comfortable graphic interface and many advanced features, Lila - with ease, print ASCII files to a PostScript printer, and many more.

WB55: Application - XCopyIII - a full featured disk copier, make backups of write protected disks. RoadRoute - find the quickest route from one city to another, highway description included, Diary - a diary program like "Dougy Howard M.D.", Cal - a calendar program, Magman - a database tailored to maintain records on articles and publications.

WB57: Animation - This disk has several "Demo" style animations, including, Blitter, Lolly, Sun5, vertigo, vortex, and xenmorph.

WB59: Business - contains a great, very full featured stock market technical analysis and tracking program, also an appointment calendar, and more.

WB61: Intermediate Utilities - Includes programs to help to drastically decrease flicker in interlace and hi-res modes (antiflick), an Atari-st emulator, an eptom programmer, turn your amiga into an eight channel digital data analyzer or oscilloscope, and more.

WB62: Midi Utilities - Several useful midi utilities including, programs to transfer to and from several music programs to midi, a midi sysex handler, a midi recorder with timebase, display midi info, file sequence player, and a few scores.

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the first place.

The best method: swap colors 1 and 2, black and white. (Obvious, isn't it?). Let's look at what we need to do with the display bitplanes to make this happen.

Bit combination 00 will not change. Bit combination 01 changes to 10. Bit combination 10 changes to 01. Bit combination 11 will not change.

Achieving this is dramatically simple: just swap the two display bitplanes! The effect is the same as swapping the two digits of a binary number: of course 00 and 11 will not change, and of course 10 becomes 01 and vice versa.

Some Quick Tests

All this can be easily written in AmigaBasic. In fact, I did the color change testing that way. After you open a file, you can read the whole thing in one line with a command such as `FL$=INPUT$(LOF(1),1)`. Find the right byte positions in string `FL$` and swap them around, perhaps using a line that starts `MID$(FL$,...) = ...`

Most 'artistic' icons converted in this way looked quite good in 2.0. Of course, these 2.0-converted icons looked lousy when they taken back to be viewed on a Workbench 1.3 system. Figure 3b shows this. My icon displayed a Jekyll-and-Hyde personality; no matter which system it fitted, it looked rather sinister when displayed on the opposite one.

The Punch Line

I found this investigation into the mechanics of icons to be interesting in its own right. That's just as well. If you really want to do such a conversion, it's trivial on a DOS 2.0 system.

Here's how: load up IconEdit from the Tools drawer of your Extras2.0 disk. Bring in the image you'd like to convert; if it's a two-image icon, both will be displayed immediately. Now: hold down the right-Amiga key and tap the letter M. The job is done; you may save the result. If you prefer, you can make the conversion by selecting item *Remap B/W* from the *Misc* menu.

Remember that this is a two-way solution to the conversion problem. Since the whole job is achieved by simply flipping the two bitplanes, it works either way. If you have a 2.0 icon you'd like to convert to look good on 1.3, just hit the same buttons.

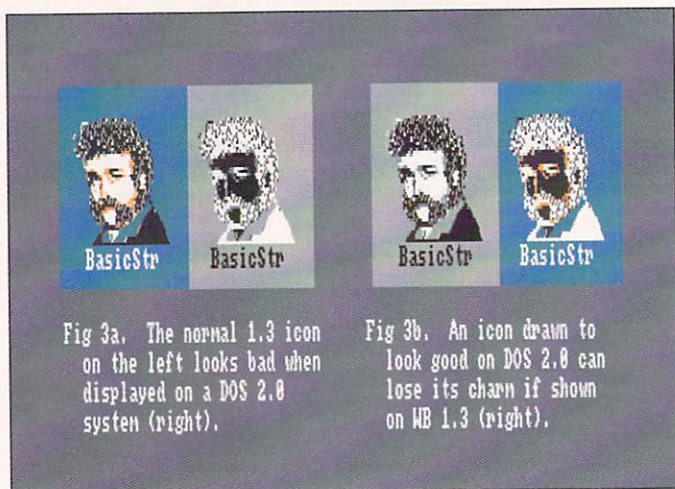


Figure 3. Many items will need "color conversion" to look good on the "other" system. The icon shown here is a portrait originally created by Betty Clay.

A GUIDE TO RAM CHIPS

by Skipper Smith

This article came about when people in my user group told me that they had no idea what I was talking about when I said that I had "two megabytes of one meg by one, 80 nanosecond, nibble-mode DRAMs in DIP configuration" for sale. Since the Amiga has so many different vendors making so many different products requiring so many different memory types - and since I work for a major semiconductor manufacturer - they put me up to writing this short primer about memory products.

Static or Dynamic?

Many people are unaware of the standard acronyms and identifications used by the semiconductor industry. In the beginning, there was SRAM (Static Random Access Memory, pronounced 's-ram'). SRAM should not be confused with Static Column RAM, which will be discussed later. It was relatively slow (though faster than the alternatives of the time - punch cards, paper tape, and core memory), power hungry, and space consuming. SRAM has gotten extremely fast in recent years, but it is still power hungry, takes up a lot of space, and is quite expensive. One will not find too many designs for the Amiga using this type of RAM except, notably, the *CSA Mega-Midget Racer*, which can accept up to 512K of it, along

with other types of memory expansion.

SRAM has been superseded in most designs by another type of memory called DRAM (Dynamic RAM, pronounced 'd-ram'). The main differences between SRAM and DRAM lie in their support circuitry requirements. As long as SRAM is supplied with sufficient power, it will remember what has been stored in it. DRAM chips, on the other hand, don't need power supplied constantly, which means they aren't as power hungry and don't generate as much heat. However, they quickly forget any information stored in them unless they are occasionally 'refreshed'. A signal must be sent periodically to recharge all of the tiny capacitors on the chip. Refreshing must be done often enough that the memory chips don't forget what they were told to remember, but not so often that the refresh cycles interfere with normal operation of the computer, since the chips cannot be accessed while they are being refreshed.

The refresh operation requires quite a bit of external circuitry, but since DRAMs consume much less power, come in smaller packages with fewer pins, can hold more information (leading edge DRAMs generally hold four times as much as leading edge SRAMs), and generally cost less than SRAMs, most designs will use DRAMs. Fortunately, new technologies have enabled

DRAMs to be used in designs where only SRAMs would have been used previously.

Packages

Besides these internal differences, RAM chips also come in different physical packages. The DIP (Dual In-line Package) is probably the most common package available. Almost everyone involved in computers has seen DIPs - they look like little bugs with numerous legs sprouting from each side. DIPs are probably the simplest package to produce and are generally the least expensive to buy. DIPs also dissipate heat readily since they have so much surface area exposed on the top. The superior heat dissipation of the DIP package means that they can generally run faster and in hotter environments than any other chip design. Unfortunately, they have a down side: because they have so much surface area, they take up much of the circuit board space that could be used for other things.

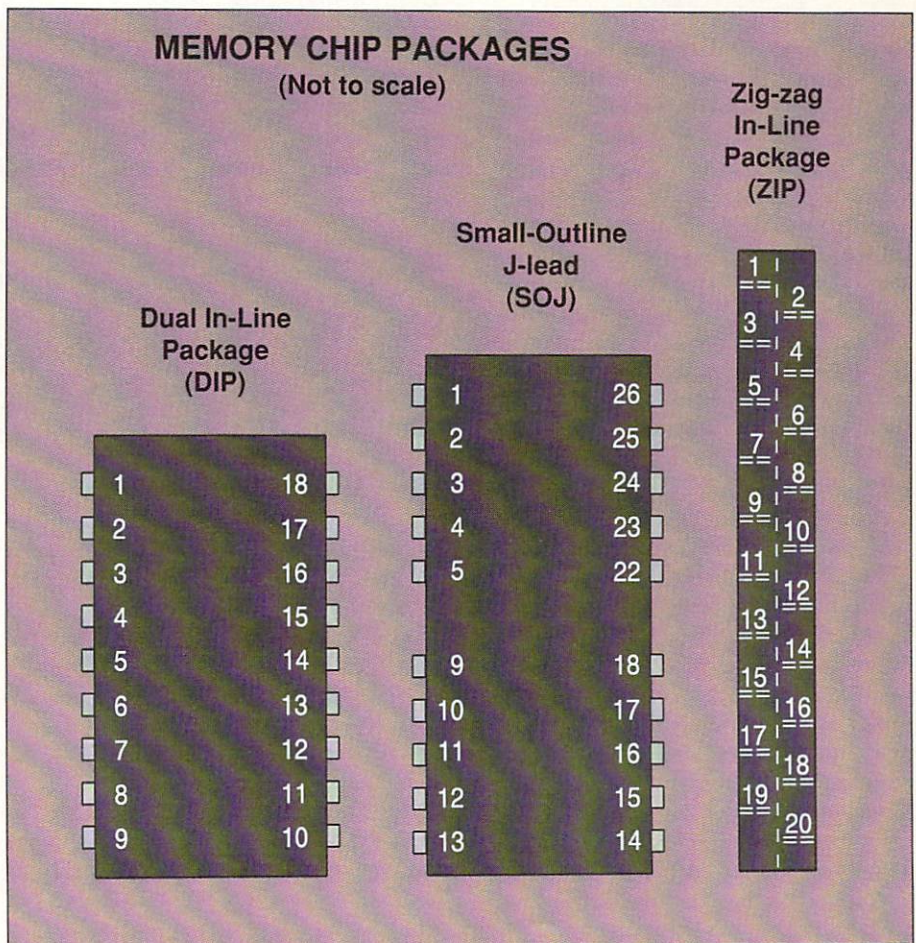
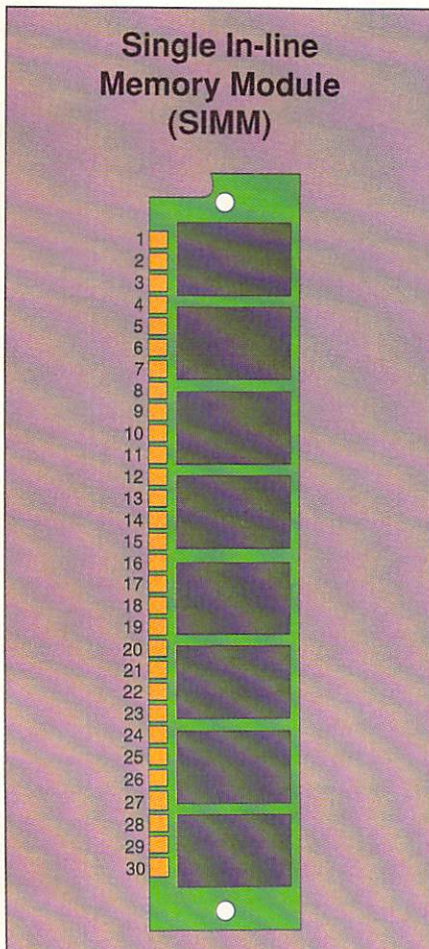
As circuit board real estate becomes more valuable, computers like the Amiga 3000 are

using another type of package known as a ZIP (Zig-zag In-line Package). This package is shaped the same as a DIP, but all the legs come out from only one side, with every other leg bending to one side or the other. Like the tall buildings in a city's downtown, this package saves real estate by going vertical and packing closely together with its neighbors. The proximity of the chips to each other, however, means that they become relatively hot since most of the heat each package dissipates is absorbed by its neighbor. Designs using ZIPs require better cooling to keep from overheating.

Lately, a compromise seems to have been found in the SIMM (Single-In-line Memory Module) package. Whereas the DIP and ZIP acronyms describe individual chips, a SIMM is a small printed-circuit (PC) board on which any type of memory chip of any number and size can be placed. (Some SIMMs even have chips on both sides of the PC board). The entire module is then plugged into a special socket designed to accept it. The most common chip found on SIMMs is

the SOJ (Small-Outline J-lead; J-lead means that the pins bend under the package to minimize the area necessary to attach the chip to the PC board). Its low profile allows the SIMMs to be placed very close to each other. You must be careful when selecting SIMMs, as there is no such thing as a standard SIMM, and plugging the wrong type into a memory board's socket could be a disheartening and even damaging mistake.

The advantages of SIMMs are balanced by the negatives. On the one hand, they save real estate by going vertical (or diagonal, sometimes) and are very easy to install: *snap*, and they are in. They are difficult to install improperly and have generally good cooling characteristics. On the down side, a SIMM designed for one board may not work in another, making it difficult to scavenge parts. And if just one chip on the PC board (of which there are commonly eight) goes bad, the whole SIMM needs to be replaced. As memory prices continue to drop, however, the latter becomes less of an issue and,



fortunately, a de facto standard for the SIMM has developed which the majority of designs use. (An exception is the new line of accelerators from Great Valley Products, which are a major departure from that standard; GVP says this was necessary for performance reasons.)

Burst Modes

Finally, and possibly most confusing, are the varying 'burst' modes that are now available in DRAMs. Burst transfers allow inexpensive DRAMs to operate as fast as expensive SRAMs when used in conjunction with a processor that supports burst transfers, such as the Motorola 68030. There are three types of burst modes: page, nibble, and static column. The latter two are the most commonly used. It takes no more silicon to make a DRAM that uses one of the burst modes than one that doesn't, so chances are that any DRAM you buy will support one of the three modes.

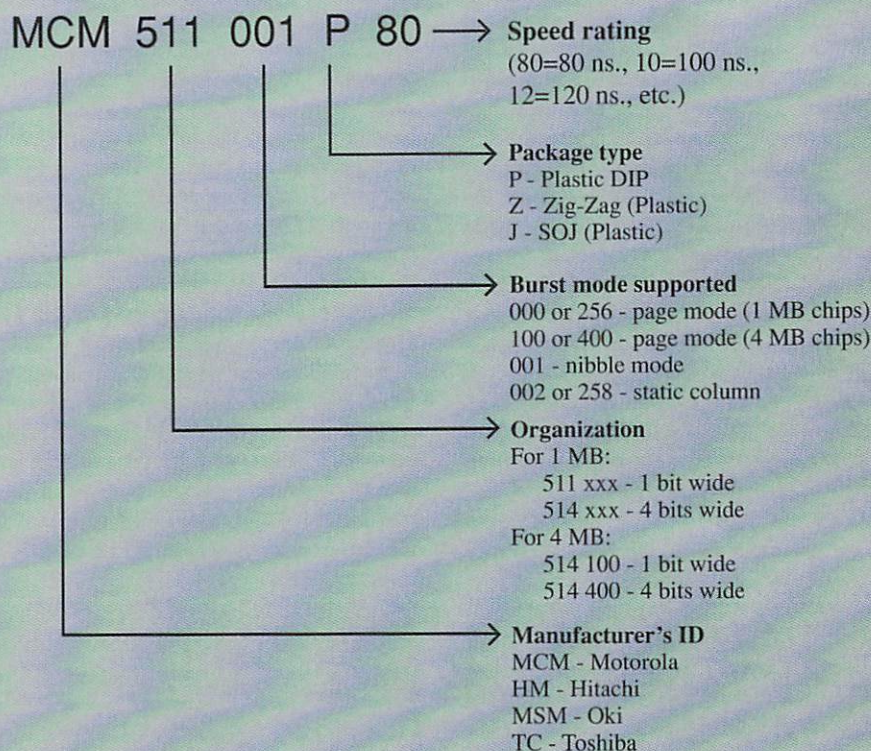
Using any burst mode type in a system that doesn't support burst transfers won't affect system performance, but using the wrong type of burst mode chip in a burst transfer supporting design could cause serious system problems. For example, the Amiga 3000 uses static column ZIP DRAMs; with any other burst type the machine loses about 15 to 20 percent performance. For this reason, it is important to state the burst mode required when buying DRAM. Due to supply reasons, static column DRAMs (sometimes incorrectly referred to as SCRAMs) are more expensive than the other two, but since they allow for greater flexibility in design and superior performance in most applications, static column DRAMs are worth the cost.

Plugging It In

Computers are not quite as fragile as most new users fear, so letting your dealer do all the work of installing memory (with the attendant costs) is really unnecessary. Just make sure to use the type of memory specified by the manufacturer, and never force the pins into their sockets. Then bring your Amiga to the next users' group meeting to show off your new knowledge and, most importantly, your machine with its new 2 Mbytes of 1 Mbit by 1, 100 ns. DIP DRAMs.

Skipper Smith is a technical trainer with Motorola SPS, Inc. He specializes in the 68000 family of microprocessors.

It is impossible to list the ways to identify every company's chips, but many companies use a similar pattern of identification. The following numbering scheme is applicable to Motorola, Toshiba, Hitachi, and Okidata individual chips:



AMIGADOS SCRIPTS

Programming Without the Pain

by Chris Zamara

If you use the AmigaDOS CLI or Shell, you're probably familiar with a host of commands like *Copy*, *List*, *Dir*, *Rename*, etc. These commands are programs included on the system disk, and let you use AmigaDOS to perform common operations with files. Sometimes, though, one of these commands doesn't do quite what you need; perhaps you find yourself typing in a number of commands to do a single, specific task. Maybe you need to process a large number of files using a sequence of commands. For situations like this, you don't always need to write a customized program - you can often accomplish what you need using an AmigaDOS script. Scripts are just

files containing a sequence of commands, and they can be made to act exactly like one of the native commands in the C: directory. DOS scripts are rather primitive compared to a program written in full-blown programming language, but for many everyday programming problems, they can be an ideal solution.

In its simplest form, a DOS script is just a list of commands for the Amiga to execute, as if you typed each one on the command line yourself. Perhaps the best-known example of a DOS script is the 'Startup-Sequence' that is executed when the system boots up. You can take a look at the startup sequence by typing it from a

shell window:

Type **s:startup-sequence**

As you can see, the startup sequence is a text file with a list of commands that are performed when the startup sequence is executed, which happens automatically after the system has come up.

Writing Your Own Scripts

A script is an ASCII text file that you can create with any text editor. A simple example of a text editor is the *Ed* program in the C: directory of the standard Workbench disk; a better editor is *MEmacs* in the *Tools* drawer of the Extras disk (of Workbench release 1.3). Some of you will no doubt have your own favorite text editors; ASDG's *Cygnus Ed Professional* and Rick Stiles' *UEdit* are a couple of examples of high-powered editors used by professional programmers. For the relatively light duties of script-writing, however, *MEmacs* is fine, and even *Ed* is not completely unusable.

For simple scripts consisting of just a few commands, you don't even need to use a text

editor; you can just copy from the CLI or Shell's console window directly to your script file. Try this command:

Copy * s:scriptfile

You can now type the script in, pressing RETURN after each line. Try entering a simple script, one that simply executes a few commands:

```
dir
info
cd
```

Now, to finish the script, press CTRL- (hold down the Ctrl key and press backslash); this sends an EOF (End Of File) to the console, telling AmigaDOS to end console input and close the file.

Take a look at the script file you've just created: **Type s:scriptfile**. Now execute it like this:

execute s:scriptfile

The three commands, *Dir*, *Info*, and *Cd*, will be executed as if you had typed them into the shell yourself. Fortunately, much more useful examples of scripts are possible, thanks to a number of special features built into the *Execute* command.

Executing Scripts

A script can be executed in a number of ways:

- Using the *Execute* command: as in the above example, any script file can be run at any time by giving its file name as an argument to *Execute*.
- As a command: with the command shell under version 1.3 of AmigaDOS and later, a script file can be executed as if it were a regular command or program. To do this, the file must have its 'S' protection bit set; you can set this bit using the *Protect* command as follows: **protect <scriptname> +s**. After this has been done, you can just type the script's name to execute it; like other commands, the script file can be either in your current directory, or anywhere in your command path (scripts are normally placed in the 'S:' directory).
- From an icon: a script can be set up to do its job when an associated icon is double-clicked from the Workbench. This is accomplished with the help of the *IconX* program. A complete discussion of this technique can be found



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in the article "DOS Scripts and IconX" in the *.info technical support* section of issue #35.

Command Arguments

Since a script is like a homemade sort of AmigaDOS command, it can accept arguments in the same way as *List*, *Copy*, etc. Arguments are supplied to the script on the command line, and can be used to specify a file name for the script to work on, specify switches or options, or any other information that the script needs to work with.

Before we get into the topic of command templates - a powerful feature of AmigaDOS scripts and commands - let's look at using simple arguments in a script file. Suppose we wish to write a script to copy a given font into the current 'fonts:' directory. This is a good application for a script, because it involves several operations: copying the '.font' font definition file, and copying the directory containing the font definition itself.

To use the script, we wish to just give the name of the font, like 'Garnet', and have the details taken care of automatically. The script has to get the specified font name from the command line, then use that name as the font directory name and to form the name of the '.font' file. For this simple example, the script assumes that the specified font is in the current directory. The script would look like this:

```
.KEY FONT
Echo "Copying font '<FONT>' to
FONTS:..."
Copy <FONT> TO fonts:<FONT> ALL
Copy <FONT>.font TO fonts:
If you called this script file 'CopyFont' and
set its script protection bit (protect CopyFont
+s), you could use it like a special command:
CopyFont Garnet, for example
(assuming the Garnet font is in your current
directory and you wish to copy it to your
'fonts:' directory). (This script has the unfortunate
behavior of copying everything in the
current directory into 'fonts:' if you don't
supply a command-line argument; we will
correct this behavior later with a simple template
trick.)
```

How does it work? Note the first command in the script. Any line starting with a period is a special directive for script files, and is interpreted by the *Execute* command. The KEY directive specifies the command-line *template*, which defines the arguments that the script can take. The 'FONT' in the .KEY command means that there is a single

argument called 'FONT'. When the expression appears anywhere in the script, it will be replaced with the actual argument that was entered when the script was executed. Thus, if 'Garnet' was entered as the argument, 'fonts:' becomes 'fonts:Garnet', and '.font' becomes 'Garnet.font'.

The '<' and '>' characters are special brackets that are used to indicate arguments in a script. Unfortunately, these characters can have another meaning in AmigaDOS scripts, since they are used as input/output redirection operators. This can cause problems for *Execute*. Fortunately, these bracket characters can be redefined by means of two special script directives, BRA and KET. It is a good idea to redefine the angle brackets right after the KEY directive as follows:

```
.BRA {
.KET }
```

Now, whenever you want to use a command-line argument in a script, you just use the curly brackets, for example: {font}.

Templates

The .KEY directive lets you specify an entire *template* for the script, which is a powerful concept. A template can specify one or more arguments, keywords, and switches that may be specified on the command line.

Arguments are values that *must* be supplied on the command line, or AmigaDOS will complain. In the above example, we can make the script insist on getting the font name, correcting its bad habit of copying everything if no arguments are given. The template could be changed like this:

```
.KEY FONT/a
```

The '/a' specifies that 'FONT' is a required argument. Since AmigaDOS sees from this that at least one argument is required, executing the script without giving it a font name will now cause an error message to be displayed (showing the specified KEY template definition).

Argument Keywords

Any number of arguments may be specified in a template, some required and some optional. How does the user specify which arguments he wishes to use? This is done through the use of *keywords*, which makes AmigaDOS commands a little more friendly to use. The *Copy* command, for example, uses the keywords FROM and TO, which, like all keywords, are optional: if the key-

words aren't used, the arguments are simply filled in from the command line in the order they were specified.

As an example, let's write a script that simply takes some personal data as arguments, and displays the data in a nice way.

How about this:

```
.KEY NAME,AGE,SEX,HT,WT
Echo " Name: <NAME>"
Echo " Age: <AGE>"
Echo " Sex: <SEX>"
Echo "Height: <HT>"
Echo "Weight: <WT>"
```

To use this script, you could simply pass all of the optional arguments - name, age, sex, height and weight - in the correct order on the command line. But what if you don't always remember the correct order? What if you want to enter only a name and height? This is where keywords come in. Assuming the script was called 'PInfo', you could use it like this:

```
Execute PInfo NAME "Bob Jones"
HT 5ft9
```

By specifying the keywords in the command line, only the desired arguments are supplied. (The case is not significant; upper case is shown here merely to distinguish the keywords from the arguments. You can use either upper or lower case in keyword definitions, and in the use of keywords on the command line.) Using the keywords, arguments may be supplied in any order: 'HEIGHT 5ft9 NAME "Bob Jones"' would work equally well. (Note the quotes around the name 'Bob Jones'. Quotes are required for any argument that contains one or more spaces, so that the separate words aren't taken as separate arguments.)

Unless a keyword is specified for an argument on the command line, the arguments are filled in the order they are specified. By specifying that an argument is a 'keyword' type in the template, however, you can force the user to explicitly use the keyword for an argument. Keywords are specified with the '/k' option in the KEY directive. If you wanted to insist on keywords being used for all of the personal info arguments except for name (which we'll make a required argument), you would define the template like this:

```
.KEY NAME/a,AGE/k,SEX/k,HT/k,WT/k
```

One other type of argument is the *switch*. A switch is simply a keyword that can be specified on the command line without any associated argument. The script can then check whether the switch was specified or not (more about this later) and act accordingly. Switches

are specified using '/s' in the template.

It's interesting to note that AmigaDOS uses the same keys when you ask it for help with a command. This is done by following the command with a '?'. For example, if you enter: *DIR ?* from the CLI, AmigaDOS responds with the template:

```
DIR, OPT/K, ALL/S, DIRS/S, FILES/S,
INTER/S:
```

Default Arguments

For arguments that aren't specified by the user on the command line, default values can be established using the .DEFAULT (or .DEF for short) directive. For example:

```
.DEFAULT SEX M
```

This would set the 'SEX' argument to 'M' if the user didn't specify a SEX argument on the command line.

You can also specify a default value for an argument at the time the argument is used; this lets you use different defaults in different places in the script. The dollar-sign symbol is used to indicate default val-

ues in this way. Instead of using the above DEFAULT directive, for example, you could use '<SEX\$M>' to refer to the argument in the script. This means "use the value supplied for the argument 'SEX', or the value 'M' if no argument was supplied".

The Power of '?'

Just a few paragraphs back, we mentioned the question-mark command line argument that shows an AmigaDOS command's template. The question mark also works for scripts, showing the template defined in the .KEY command. This is useful when using a script that you created a while ago when you don't remember all the arguments it accepts.

There's another interesting property of the question mark that can be especially useful in scripts. When you put a question mark on the command line of an AmigaDOS command, it not only shows the command template, but prompts the user to type in any arguments that haven't been supplied on the command line already. This

last point is important: only unsupplied arguments need to be typed in by the user, and the rest are taken from the command line. Consider the following command:

```
Copy TO ram: ?
```

This command will show the template for *Copy*, and accept the name of a file from the user; the file will be copied to the destination already specified on the command line (ram:), since *Copy*'s TO keyword was used. In a script, you could get user input for such a command in a more elegant way, supplying your own prompt and suppressing the output from the *Copy* command:

```
Echo "Enter filename to copy"
```

```
Copy >nil: TO ram: ?
```

Conditional Branching

It was mentioned earlier that a script could examine an argument and do different things based on its contents. This is done using the IF, ELSE, and ENDIF commands, which work as in most programming languages. The IF statement lets you compare an argument with any text (numerical comparisons can






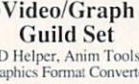





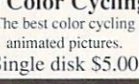
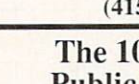
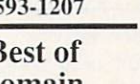
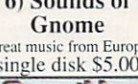

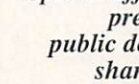
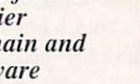


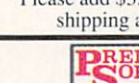
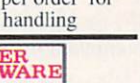
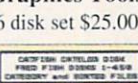

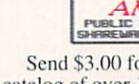
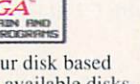

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also be made), and only execute a certain segment of the script if the comparison is true.

For example, suppose in the 'Personal-Info' script above, we wish to display a different message for male and female data. This could be done as follows (after the .KEY and .DEFAULT directives):

```
IF <SEX> EQ "F"
  Echo "Info for Ms. <NAME>"
ELSE
  Echo "Info for Mr. <NAME>"
ENDIF
```

This will display a 'Ms.' before the name if the sex is specified as 'F' (either upper or lower case), and display 'Mr.' otherwise. The 'EQ' argument in the IF command makes IF test for the condition 'equal to.' Other comparisons are possible as well, which we'll cover in a future discussion about numeric variables in scripts. (IF EXISTS, for example, can be used to check for the existence of a specified file or directory on disk.) The indentation of commands in the above example is not required at all, but simply makes it easier to see the commands that belong within the IF and ELSE clauses. Any number of commands may be specified within the IF or ELSE clauses. As with most languages, use of the ELSE clause is optional.

To use IF to test whether a certain argument was supplied or not, you can compare the argument to a 'null-string', represented by two quotes with nothing in between. Suppose we would only like the above header information to be displayed when a HEADER switch was specified on the command line. First of all, the switch would be defined in the KEY directive by adding 'HEADER/s'. Then, the entire IF...ENDIF sequence above could be surrounded by another IF/ENDIF pair with the following condition:

```
IF <HEADER> NOT EQ ""
```

The 'NOT' argument used with IF in this instruction reverses the condition, testing for 'not equal to' instead of 'equal to'.

Another way to control branching in a script is through the SKIP and LAB commands. LAB lets you label a point in a script, and SKIP lets you jump forward to a specific label. With the BACK keyword added to the SKIP command in 1.3, you can skip backwards to a label as well. For example, this script will remain in a loop forever (until you break it with CTRL-D):

```
LAB start
  Echo "Help!..."
  SKIP start BACK
```

A Personal Logbook

by Chris Zamara

Diane, I'm pulling into a quaint little Northwestern town..."

For fans of the offbeat *Twin Peaks* television series, the above quote is instantly recognizable as one of Agent Cooper's entries into his personal log, a message left on a pocket tape recorder to his unseen assistant Diane. Although Coop's

log entries often bordered on the eccentric, the idea of recording important notes at the moment they pop into your head - along with the time and date - can be a useful one. The following DOS script - appropriately called 'Diane' - is a computerized aid to this sort of spontaneous logbook.

Type the Diane script as listed into a text

```
. 'Diane' script for quick notes
. (only works under AmigaDOS v1.3 and newer)

.KEY note,logfile/k,masterfile/k,master/s,goodnight/s
.BRA {
.KET }

.DEF logfile "s:Diane.log"
.DEF masterfile "s:MasterLog"

; create daily and master log files if they don't exist

IF NOT EXISTS {logfile}
  Echo >{logfile} "***** 'Diane' daily log entries:"
ENDIF

IF NOT EXISTS {masterfile}
  Echo >{masterfile} "**** Master log of 'Diane' entries ****"
ENDIF

; show log, or add note to daily log if specified

IF "{note}" EQ ""
  IF "{master}" EQ ""
    Type {logfile}
  ELSE
    Type {masterfile}
  ENDIF
ELSE
  Date >>{logfile}
  Echo >>{logfile} "          {note}"
ENDIF

; if 'goodnight' specified, update master log and clear daily log

IF "{goodnight}" NOT EQ ""
  IF EXISTS {logfile}
    Type >>{masterfile} {logfile}
    Echo >>{masterfile} ""
    Delete {logfile}
  ENDIF
ENDIF
```


editor and save it (as 'Diane'). If you are using an AmigaDOS 1.3 (or 2.0) Shell, set the script bit in the file with the command `Protect Diane +s`. With the script in your current directory or anywhere in your command path (S: is the recommended place for scripts), you can use 'Diane' as a command to record log entries and display the log at any time. Using a CLI or other shell, you can 'Execute Diane' to run the script.

To make a log entry, just tell Diane what you want to record in the log:

Diane "Remind me to call Harry."

The message in quotes (quotes must be used for any message containing spaces) will be added to the daily log file, preceded by the current time and date. To see the daily log at any time, just ask Diane to show it to you like this:

Diane

Assuming the above was your first log entry, you will see something like this:

```
**** 'Diane' daily log entries:
Monday 11-Mar-91 10:15:50
```

Remind me to call Harry.

Each new entry will be added to this log in a similar way. At the end of the day, you can clear the daily log to start fresh for tomorrow. Your log entries are not lost, however: all of the daily logs are appended together in a master log file, each day separated by a recognizable header. To end a daily log, say goodnight to Diane:

Diane goodnight

To see the master log - all of the previous daily logs put together - ask Diane to show it to you like this:

Diane master

You can combine keywords and messages, for example to add a final entry to the day's log before saying goodnight, you could say something like:

Diane goodnight "I'm going to sleep now."

By default, the daily log is kept in the file 's:Diane.log', and the master log in 's:MasterLog'. You can ask Diane to use different files instead by specifying the 'log-

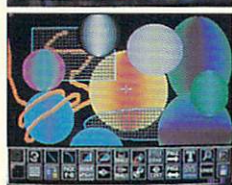
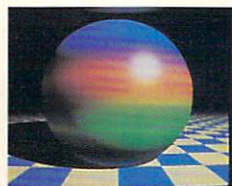
file' or 'masterfile' keywords followed by the file name you wish to use (of course, you can modify the file names used in the script for a permanent change).

If the master log is getting too large, you can just delete the file; Diane will create a new one if none exists.

A few notes on using this script: Most importantly, it will only work with AmigaDOS version 1.3 and greater, since it relies on the append-redirection operator '>>'. Also, if Diane is a bit too slow, you can speed it up by making the commands Echo, Date, If, Else, and EndIf resident.

This is a good example of the kinds of things you can accomplish with relatively simple DOS scripts. It's sometimes a good idea to develop an idea using a script like this, then convert it to a C program later if it proves worthwhile (and if the added speed and flexibility is required).

Agent Cooper would be pleased.



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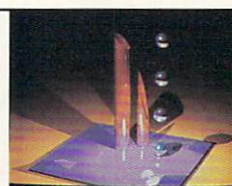
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8 ☐ Wordprocessing
9 ☐ Video
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12 ☐ Productivity
13 ☐ UNIX
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- 16 ☐ Mass Storage 19 ☐ Video Hardware
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- 22 ☐ Desktop Publishing
23 ☐ Wordprocessing
24 ☐ Video
25 ☐ Graphics/Animation
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Introducing the most complete disk utility system ever created for the Amiga. **Project D** includes a powerful Amiga disk copier, a special format copier, a software indexing utility and a disk editor. **Project D** also represents over *three years* of continuous support and enhancements.

BackupTool gives you the power to protect your software investment by making backup copies of your Amiga floppy disks. It will copy both non-protected and protected disks, *deprotecting* most of your favorite copy-protected software with ease. It supports up to four disk drives and lets you copy to multiple drives at the same time.

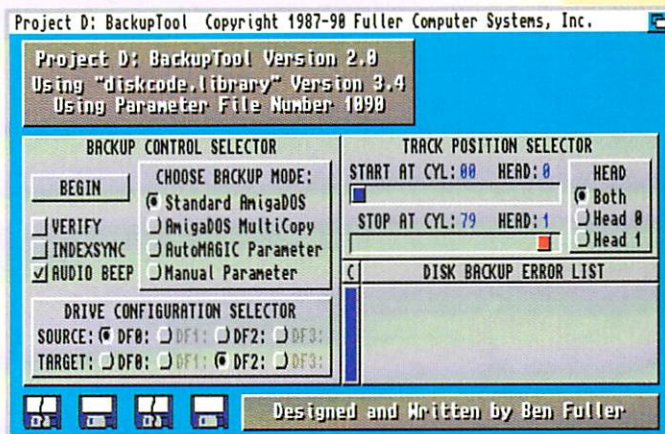
OmniTool allows you to duplicate disks that you may have for other computers. It is able to copy most protection schemes used by other computers and will even copy software that cannot be duplicated on the host machine! The **OmniTool** is able to duplicate the Atari ST, MS-DOS, CP/M and Xenix disk formats. It will also allow you to quickly duplicate most music synthesizer disk formats including *Ensoniq* and *Roland*.

EditorTool will give the expert user complete control over AmigaDOS floppy disks and hard drives. You can examine and edit disks at the sector level in HEX and ASCII. Features include data and bitmap block checksumming as well as boot block checksumming. You can search through the edit buffer for virus text, hidden passwords, messages and hex values. You can also edit MFM data on floppy disks.

CatalogTool will help you organize and index your software library. It can automatically read filenames from any AmigaDOS file system (DF0: HD0: etc.) or you can enter filenames manually. You can then quickly separate and sort your filenames into different categories.

Updating **Project D** is simple and inexpensive. We will notify you of new parameters every three months, and you can order updates as often as you like, for as low as \$10. **Project D** is not copy protected in any way and is *completely compatible* with the Amiga's multi-tasking operating system.

You get all this for \$59.95 and that includes shipping and handling! So call now and order your copy of the best Amiga disk utility system, today!



Now Shipping Project D Version 2.0
AmigaDOS Release 2 Compatible

Project D:
The Disk Copier...Plus!
AVAILABLE AT FINE AMIGA
DEALERS EVERYWHERE

...PROJECT D DELIVERS.

Just The Facts:

What Makes Digi-Paint 3 the Ultimate Paint Program?



"Finding the best paint program for your Amiga can be confusing, but once you have the facts it's simple."

Laura Longfellow
Sales Manager
NewTek Inc.

"Why is Digi-Paint 3 better than DeluxePaint III™?"

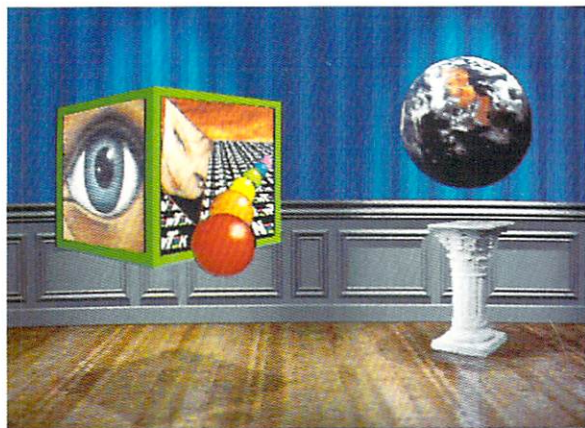
Digi-Paint 3 works in the Amiga's powerful Hold And Modify (HAM) mode, which allows you to paint using all 4096 colors simultaneously. By comparison, Deluxe Paint III (by Electronic Arts) operates in less sophisticated modes, restricting you to a maximum of only 64 colors. Advanced features available in Digi-Paint 3—including Colorizing, Variable Transparency, Shading, Lighten, Darken and Range Painting—are simply not possible in Deluxe Paint III due to its 64 color limitation. AMIGAWORLD warns, "Competitors may want to head back to the drawing board, because Digi-Paint 3 is hard to beat!"



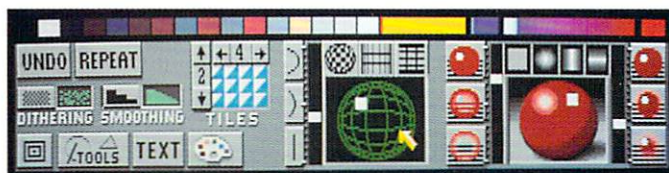
"What makes Digi-Paint 3 better than other HAM paint programs?"

Digi-Paint 3 is the only Amiga paint program written in 100% assembly language. Although challenging to program (taking up to 10 times longer than other computer languages), it's the only way to achieve the incredible speed found in Digi-Paint 3. AMIGAWORLD calls it "the fastest HAM paint program yet" and AMIGA SENTRY estimates it's, "6-10 times faster" than the nearest contender.

Other advanced features found *only* in Digi-Paint 3 include: anti-aliased texture mapping, anti-aliased fonts, ARexx support, 1024 x 1024 super bitmaps with auto-scrolling and dithering to 30 bits per pixel (over a billion colors internally, giving you tens of thousands of apparent colors). COMPUTER SHOPPER magazine reports "Digi-Paint 3 is without a doubt the most advanced HAM paint program to date!"



Digi-Paint 3, Digi-View, and Transfer 24 are trademarks of NewTek Inc. DeluxePaint III is a trademark of Electronic Arts. All brand and product names are trademarks of their respective holders.



"But is Digi-Paint 3 easy to use?"

I've learned that no matter how powerful a program is, if it's not friendly it's not worth my time. We designed Digi-Paint 3 with all users in mind—from the beginner just starting out with computers, to the "power user" who demands the most advanced features possible. The spiral-bound manual contains a step-by-step Guided Tour, 11 hands-on tutorials, a color coded reference card, and almost one hundred example photos.

Digi-Paint 3's intuitive user interface was created by Digi-View designer (and NewTek Founder) Tim Jenison and renowned Amiga artist Jim Sachs. It features innovative "Dashboard" controls which AMIGAWORLD regards as "a joy to use" and "very easy to learn and understand". INFO MAGAZINE says the new interface "looks great and works logically".



"What is the Transfer 24 program included with Digi-Paint 3?"

Transfer 24 is a separate program disk included in the Digi-Paint 3 package, allowing you to alter any picture's brightness, color saturation, contrast, hue and sharpness, almost as easily as adjusting the controls on your television set. Transfer 24 also lets you modify the size, palette, and resolution of any picture. These powerful features, known as "Image Processing", give you incredible control over your final artwork. You can also save your image in any of the Amiga's 24 resolution modes (up to 768x480) making it compatible with all Amiga graphics software. AX MAGAZINE notes that "Transfer 24 gives you even more options as to the final appearance of your work". AMIGAWORLD declares, "Transfer 24 is great for making overall changes."

"What technical support does NewTek offer?"

Digi-Paint 3 has one other thing you won't find in any ordinary paint program: a toll-free help line. If you should have any questions while using Digi-Paint 3, you're not on your own. Call NewTek's technical support team at 1-800-736-7617 Monday through Friday, 8 am - 7 pm Central Time.

Digi-Paint 3 is available now at your local Amiga dealer or call
1-800-843-8934 or 1-913-354-1146.

NewTek
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